FOLIO

Special Issue

Sponsored Research at the University of Alberta 1986-1987



This special edition of *Folio* has been prepared at the request of the Vice-President (Research).

Information was compiled by the Office of Research Services in consultation with the departments and units on campus.

Sponsored Research at the University of Alberta 1986/87

Introduction

This special edition of Folio provides a mechanism for the University of Alberta to gratefully acknowledge the role of those external organizations who have supported research programs during the 1986/87 fiscal year. The report also presents an overall statement on sponsored research at the University of Alberta, and provides an opportunity for researchers to locate other researchers and sponsoring agencies in their areas of expertise.

The listings identify selected awards totalling \$41,763,412. Total sponsored research revenue in 1986/87 was \$57,478,000.

Sponsored Research

Sponsored research includes grants, contracts, and related types of external funding. Specific awards included in this report represent contracts, plus conference, equipment, technology transfer, infrastructure, and operating research grants. Financial support provided as the result of general and development funding to the University (e.g. internal endowment transfers) is <u>outside the scope of this report</u>, as is sponsored research conducted by incorporated centres of research associated with the University (e.g. the Alberta Microelectronic Centre), and other affiliated institutions (e.g. the Cross Cancer Institute). All other categories and awards that were administered through organizations other than the Office of Research Services, University of Alberta (e.g. private consulting arrangements), are <u>also outside the scope of this report</u>, as is funding distributed via internal University of Alberta committees (e.g. the Central Research Fund).

Listings

This report identifies principal researchers, research projects and research sponsors, and notes the amount of each award. Oncampus co-investigators are also identified; however, a dollar value for each award is assigned only once in the report and appears with the listing of the investigator whose name occurs first on the original application.

Format

The report is organized as follows:

- 1) Listings of Faculties, Departments, and units (page 5).
- 2) Explanation of agency codes (page 6,7).
- 3) Agency codes listed by category (pages 7,8).

- 4) Explanation of award codes (page 8).
- 5) Sponsored research listings (pages 9-68).
- 6) Index of researchers (pages 69-71).

Note: The name of the Faculty, Department, or unit that was used in 1986/87 is the name used here (e.g. the Developmental Disabilities Centre is listed as the Centre for the Study of Mental Retardation)

Dimensions of Research

Sponsored research funding is only one measure of research effort. As a result, this report is not intended, nor should it be interpreted as, representing the entire research effort at the University of Alberta. Indeed, many disciplines are continuing to achieve positive results without external sponsorship, including published articles, books and monographs, exhibitions, patents, consultations and related activities.

Additional Sources of Research Information

Other information sources help present a more comprehensive research picture of campus-wide research activity. The University of Alberta Research Expertise Database lists the research interests and major expertise of over 1200 University staff. It is multi-disciplinary in scope, and provides an effective way to identify and locate University staff having specific knowledge or expertise in a given area. The Research Expertise Database is available to anyone with access to the campus' MTS computing system.

Faculties, Institutes or research groups produce publications of their own, often presenting more technical descriptions of their research efforts. Examples of such publications are the Faculty of Arts Report on Research and Creative Work, and the Faculty of Medicine From Laboratory to Marketplace (Biotechnology Initiatives). Among others, the Faculties of Science, Engineering, and Agriculture and Forestry also produce inventories.

Individual Departments may produce graduate calendars which are other sources of information concerning research activities. The Faculty of Graduate Studies and Research produces *A Profile* which also provides a general overview of the type of research conducted at the University of Alberta.

¹ Schedule 4, University of Alberta Financial Statements

Office of Research Services

The Office of Research Services (ORS) was established in 1982 as a reorganization of the former Research Grants and Contracts Office, and is under the direction of the Vice-President (Research). The scope of ORS functions can be divided into two areas: sponsored research and technology transfer.

In sponsored research, ORS provides the infrastructure for processing research grants (both internal through the Central Research Fund and the AHFMR Internal Allocations Committee, and external through off-campus sponsoring agencies) and contracts at the University of Alberta. In technology transfer, ORS provides support through Technology Development Officers, who assist in the transfer of University developed technologies to outside parties. ORS also maintains and updates the University of Alberta Research Expertise Database.

University of Alberta

The University of Alberta, Canada's second largest university ², is committed to the pursuit of excellence in education and research. Programs are diversified and broadly based across 18 Faculties and 88 departments. With over 1,700 faculty members having backgrounds from various parts of the world and 24,000 students from over 100 countries, the University of Alberta is appropriately referred to as an international centre in terms of its people and its outlook.

For more information on University of Alberta sponsored research, please contact:

Office of Research Services University of Alberta 1-3 University Hall Edmonton, Alberta, Canada T6G 2J9

Phone: (403) 492-5360

Selected Sponsored Research

This summary of the total amount of research awarded to individuals and directly to the University highlights the level of support provided by major agencies. The largest support to research comes from provincial and federal agencies. There is, however, a wide diversity of funding sources. A listing of all sources and their respective award codes is provided on pages 6,7, and 8.

Research Grants and Contracts from Selected Sources to Individuals and Block Grants Administered by Faculties

Agency	Amount
AHFMR ³	\$ 3,899,164
MRC	\$ 6,560,188
NSERC	\$ 15,507,274
SSHRC	\$ 542,151
Other Provincial	\$ 7,584,562
Other Federal	\$ 2,640,825
Other Agencies	\$ 5,029,248
Total	\$ 41,763,412

External Funding Awarded to the University for Distribution through the Central Research Fund ⁴

Agency	Amount
AHFMR	\$ 372,800
NSERC	\$ 424,800
SSHRC	\$ 94,038
Total	\$ 891,638

² in terms of enrollment

³ The AHFMR support is partial in this report and excludes scholarship, stipend and studentship awards. AHFMR level of support including these categories was \$13,191,000.

⁴ Annual Reports for the Central Research Fund are available from either Department Chairs' Offices or the Office of Research Services.

Faculties, Departments, Units	Faculty of Medicine 34 Department of Anatomy 35
Faculty of Agriculture and Forestry9	Department of Applied Sciences in Medicine
Department of Agricultural Engineering9	Department of Biochemistry35
Department of Animal Science	Cross Cancer Institute
Department of Entomology	Group Lipid and Lipoprotein37
Department of Food Science	Group NMR
Department of Forest Science	Department of Health Services Administration and Community
Department of Plant Science	Medicine
Department of Flural Economy	Department of Immunology
Department of Soil Science	J S McEachern Laboratory
Department of Suil Science	Department of Medical Microbiology and Infectious Diseases 39
Faculty of Arts17	Department of Medicine and Clinical Medicine
Department of Anthropology	Department of Obstetrics and Gynaecology
Department of Classics	Department of Paediatrics
Department of Comparative Literature	Department of Pathology
Department of Economics	Department of Pharmacology
Department of English	
Department of History	Department of Physiology
Department of Philosophy	Department of Psychiatry
Department of Political Science	Department of Surgery and Clinical Surgery
	Faculty of Nursing46
Department of Psychology	Faculty of Pharmacy and Pharmaceutical Sciences 47
Faculty of Business21	
Department of Finance and Management Science	Faculty of Physical Education and Recreation 48
	Department of Physical Education and Sport Studies48
Department of Marketing and Economic Analysis21	Forulty of Dobobilitation Modising
Department of Organizational Analysis	Faculty of Rehabilitation Medicine4
Faculty of Dentistry22	Department of Occupational Therapy
Department of Oral Biology	Department of Physical Therapy
Department of Restorative Dentistry	Department of Speech Pathology and Audiology
Department of Stomatology22	Faculty of Science
	Department of Botany
Faculty of Education	Department of Chemistry5
Department of Educational Administration	Department of Computing Science
Department of Educational Foundations23	Department of Genetics
Department of Educational Psychology	Department of Geography5
Educational Research Services	Department of Geology
Department of Elementary Education	Department of deology
Department of Industrial and Vocational Education	Department of Mathematics
Department of Secondary Education	Department of Microbiology
Providence Construction	·
Faculty of Engineering24	Department of Physics
Department of Chemical Engineering	Department of Psychology
Department of Civil Engineering	Department of Statistics and Applied Probability6
Department of Electrical Engineering	Department of Zoology6
Department of Mechanical Engineering	VP Academic
Department of Mining, Metallurgical	Library System
and Petroleum Engineering	University of Alberta Archives
Faculty of Extension	VP Research66
Faculty of Home Economics32	Interdisciplinary Research Units
Department of Clothing and Textiles32	Boreal Institute for Northern Studies
Department of Family Studies	
Department of Foods and Nutrition	Canadian Institute of Ukrainian Studies
·	Center for the Study of Mental Retardation
Faculty of Law33	Dovonian Botanic Garden
Faculty of Library Science34	

Agencie	S	CIIPS CIL	Canadian Institute For International Peace And Security C-I-L Incorporated
AAEM	Alberta Advanced Education	COM	Cominco
AARN	Alberta Association Of Registered Nurses	CPSYA	Canadian Psychological Association
AART	Alberta Agricultural Research Trust	CRIAW	Canadian Research Institute For The Advancement Of
ABA	Alberta Beekeepers Association	CYAN	Women
ACR	Alberta Culture And Multiculturalism	DINA	Cyanamid Department Of Indian And Northern Affairs
ACB ACOH	Alberta Cancer Board Alberta Community And Occupational Health	DN	Dene Nation
ACS	American Chemical Society	DND	Department Of National Defence
ADA	Alberta Department Of Agriculture	DRIE	Department Of Regional Industrial Expansion
AE	Alberta Environment	DUP	Du Pont Canada Incorporated
AECC	Alberta Educational Communications Corporation	EBH EC	Edmonton Board Of Health Environment Canada
AECL AED	Atomic Energy Of Canada Alberta Education	EGH	Edmonton General Hospital
AENR	Alberta Energy	EIC	Employment And Immigration Commission
AERT	Alberta Environmental Research Trust	EMRC	Energy, Mines And Resources Canada
AF	Alberta Department Of Forestry	FAS	Fitness And Amateur Sport
AFDRT	Alberta Forest Development Research Trust	FOC	Fisheries And Oceans Canada
AFL	Alberta Federation Of Labour	GNWT HEINZ	Government Of The Northwest Territories Heinz Company Of Canada
AFLA AFNR	Alberta Foundation For The Literary Arts Alberta Foundation For Nursing Research	HRUD	Hrudey, Steve E And Associates Limited
AFP	Alberta Food Products	HWC	Health And Welfare Canada
AGCA	Agriculture Canada	IDRC	International Development Research Center
AGT	Alberta Government Telephones	IMC	International Minerals Corporation
AHFMR	Alberta Heritage Foundation For Medical Research	IOL KFC	Imperial Oil Limited
AHPW	Alberta Housing And Public Works	KSC	Kidney Foundation Of Canada Kellogg Salada Canada Incorporated
ALED ALF	Alberta Economic Development Alberta Law Foundation	LGL	L G L Limited
AMHAC	Alberta Mental Health Advisory Council	LSC	Landis Seed Canada Limited
AMOCO	Amoco Canada Petroleum Company Limited	LTI	Liposome Technology Incorporated
AMUSA	Alberta Museums Association	MDA	Muscular Dystrophy Association Of Canada
ANAQ	Anaquest	MDBDF MISC	March Of Dimes Birth Defects Foundation Miscellaneous Private Donations
AOSTR APA	Alberta Oil Sands Technology And Research Authority Alberta Pharmaceutical Association	MRC	Medical Research Council
APPM	Alberta Pork Producers Marketing Board	MRW	Morris Rod Weeder Company Limited
ARC	Alberta Research Council	MSI	MSI Foundation
ARCA	Agriculture Research Council Of Alberta	NATO	North Atlantic Treaty Organization
ARP	Alberta Recreation And Parks	NCI NCOR	National Cancer Institute Of Canada Novacor Chemicals Limited
AS ASSCH	Arthritis Society Alberta Social Services And Community Health	NGS	National Geographic Society
ASSUR	Alberta Sheep And Wool Commission	NIMR	G Allan Roeher Institute
AT	Alberta Transportation	NORSK	Norsk Hydro
ATOUR	Alberta Tourism	NOVA	Nova Corporation
ATRT	Alberta Technology, Research And Telecommunications	NRC	National Research Council Of Canada
AWP	Alberta Wheat Pool	NSERC NSF	Natural Sciences And Engineering Research Council National Science Foundation
AWWA BCHC	American Water Works Association British Columbia Health Care	OMAC	Occupational Medical Association Of Canada
BIOM	Biomira Incorporated	ORTHO	Ortho Pharmaceuticals
BM	Bristol-Myers Company	PAE	Petroleum Aid To Education Trust Fund
BVI	Bow Valley Industries Limited	PALM	Palm Dairies-Cringle Foundation
CCA	Canadian Council Of Archives	PC PCS	Parks Canada Potash Corporation Of Saskatchewan
CCAC	Consumer And Corporate Affairs Canada Canola Council Of Canada	PENN	Pennwalt Corporation
CCFF	Canadian Cystic Fibrosis Foundation	PFIZ	Pfizer Incorporated
CDA	Canadian Diabetes Association	PMI	Pitman-Moore Incorporated
CDLA	Canadian Library Association	PPI	Potash And Phosphate Institute
CE	City Of Edmonton	RCMP	Royal Canadian Mounted Police
CEA	Canadian Electrical Association	RHONE ROTCL	Rhone-Poulenc Pharmaceuticals Incorporated Rotary Club
CEMA CFIC	Canadian Egg Marketing Agency Canadian Foundation For Ileitis And Colitis	RPWF	Recreation, Parks And Wildlife Foundation
CFS	Canadian Forestry Service	SEARL	Searle, G D And Company Of Canada Limited
CFUS	Canadian Foundation For Ukrainian Studies	SERAG	Seragen Incorporated
CGC	Canada Grains Council	SGC	Solicitor General Canada
CGPA	Canadian Gas Processors Association	SPC SRMP	Sport Canada Sr Metal Protection Limited
CHEL	Canadian Hunter Exploration Limited	SSC	Secretary Of State Canada
CHEM CHF	Chembiomed Limited Canadian Heart Foundation	SSHRC	Social Sciences And Humanities Research Council
CIBAC	Ciba-Corning Limited	STEL	Stelco Incorporated
CIDS	Canadian Infectious Diseases Society	SYN	Syntex Incorporated
		TAIHO	Taiho Pharmaceuticals Limited

TAUC	Transalta Utilities Corporation	Canadian	Government Department
TTU	Texas Tech University		Agriculture Canada
TWH	Toronto Western Hospital	CCAC	Consumer And Corporate Affairs Canada
UFL	U F L Foods Incorporated	CFS	Canadian Forestry Service
UNGG	United Grain Growers	DINA	Department Of Indian And Northern Affairs
USAF	U S Air Force	DND	Department Of National Defence
USDA	U S Department Of The Army	DRIE	Department Of Regional Industrial Expansion
USFS	United States Forest Service	EC	Environment Canada
USNIH	U S Public Health Services	EIC	Employment And Immigration Commission
UT	University Of Toronto	EMRC	Energy, Mines And Resources Canada
ÜVIC	University Of Victoria	FAS	Fitness And Amateur Sport
WCOF	Western Co-Operative Fertilizers Limited	FOC	Fisheries And Oceans Canada
WGRF	Western Grains Research Foundation	HWC	Health And Welfare Canada
WRC	Welding Research Council	PC	Parks Canada
WRFN	Wild Rose Foundation	RCMP	Royal Canadian Mounted Police
******	Who Hose I bandalion	SGC	Solicitor General Canada
		SPC	Sport Canada
Agonois	no hu Cotogoru	SSC	
Agencie	es by Category	55C	Secretary Of State Canada
Alberta G	Government Agency	Canadian	Government Foundation/Trust
ACB	Alberta Cancer Board	IDRC	International Development Research Center
AMHAC		Came dia -	Private Association/Conjety
ARCA	Agriculture Research Council Of Alberta		Private Association/Society
ALIOA	Agriculture Hesearch Council Of Alberta	AARN	Alberta Association Of Registered Nurses
Alberta G	Government Crown Corporation	ABA	Alberta Beekeepers Association
AECC	Alberta Educational Communications Corporation	AFL	Alberta Federation Of Labour
AGT	Alberta Government Telephones	AMUSA	Alberta Museums Association
AOSTR	Alberta Oil Sands Technology And Research Authority	APA	Alberta Pharmaceutical Association
ARC	Alberta Research Council	APPM	Alberta Pork Producers Marketing Board
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AAEM	Alberta Advanced Education	CCC	Canola Council Of Canada
AC	Alberta Culture And Multiculturalism	CCFF	Canadian Cystic Fibrosis Foundation
ACOH	Alberta Community And Occupational Health	CDA	Canadian Diabetes Association
ADA	Alberta Department Of Agriculture	CDLA	Canadian Library Association
AE	Alberta Environment	CEA	Canadian Electrical Association
AED	Alberta Education	CEMA	Canadian Egg Marketing Agency
AENR	Alberta Energy	CGC	Canada Grains Council
AF	Alberta Department Of Forestry	CGPA	Canadian Gas Processors Association
AHPW	Alberta Housing And Public Works	CIDS	Canadian Infectious Diseases Society
ALED	Alberta Economic Development	CPSYA	Canadian Psychological Association
ARP	Alberta Recreation And Parks	CRIAW	Canadian Research Institute For The Advancement Of
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ASSCH	Alberta Social Services And Community Health	DN	Dene Nation
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AFDRT		WRC	Welding Research Council
	Alberta Forest Development Research Trust	*****	Troiping Hosparon Sourion
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	Alberta Foundation For Nursing Research	MISC	Miscellaneous Private Donations
AHFMR	Alberta Heritage Foundation For Medical Research		Wilder and the second s
RPWF WRFN	Recreation, Parks And Wildlife Foundation	Canadian	n Private Foundation/Trust
VVICIN	Wild Rose Foundation	ALF	Alberta Law Foundation
Canadia	n Government Agency	CFIC	Canadian Foundation For Ileitis And Colitis
CCA	Canadian Council Of Archives	CFUS	Canadian Foundation For Ukrainian Studies
CIIPS		CHF	Canadian Heart Foundation
MRC	Canadian Institute For International Peace And Security Medical Research Council	KFC	Kidney Foundation Of Canada
NRC		MSI	MSI Foundation
NSERC	National Research Council Of Canada	PALM	Palm Dairies-Cringle Foundation
SSHRC	Natural Sciences And Engineering Research Council Social Sciences And Humanities Research Council	WGRF	Western Grains Research Foundation
Canadia	n Government Crown Corporation		Private Industry/Business
AECL	Atomic Energy Of Canada	AFP	Alberta Food Products
		AMOCO	Amoco Canada Petroleum Company Limited
		ANAQ	Anaquest
		AWP	Alberta Wheat Pool
		BIOM	Biomira Incorporated

BVI Bow Valley Industries Limited
CHEL Canadian Hunter Exploration Limited

CHEM Chembiomed Limited
CIBAC Ciba-Corning Limited
CIL C-I-L Incorporated

COM Cominco CYAN Cyanamid

DUP Du Pont Canada Incorporated EGH Edmonton General Hospital HEINZ Heinz Company Of Canada

HRUD Hrudey, Steve E And Associates Limited IMC International Minerals Corporation

IOL Imperial Oil Limited

KSC Kellogg Salada Canada Incorporated

LGL LGL Limited

LSC Landis Seed Canada Limited
LTI Liposome Technology Incorporated
MRW Morris Rod Weeder Company Limited

NCOR Novacor Chemicals Limited NOVA Nova Corporation

NOVA Nova Corporation
ORTHO Ortho Pharmaceuticals

PAE Petroleum Aid To Education Trust Fund
RHONE Rhone-Poulenc Pharmaceuticals Incorporated
SEARL Searle, G D And Company Of Canada Limited

SRMP Sr Metal Protection Limited STEL Stelco Incorporated SYN Syntex Incorporated

TAIHO
Taiho Pharmaceuticals Limited
TAUC
TRANSAITA Utilities Corporation
TOPIC TOPIC

WCOF Western Co-Operative Fertilizers Limited

Foreign Private Industry/Business

NORSK Norsk Hydro

Multi-National Agency

NATO North Atlantic Treaty Organization

Other Canadian University
UT University Of Toronto

UVIC University Of Victoria

Other Government - Municipal

CE City Of Edmonton EBH Edmonton Board Of Health

Other Government Crown Corporation

PCS Potash Corporation Of Saskatchewan

Other Govt. Agency/Foundation/Dept.

BCHC British Columbia Health Care
GNWT Government Of The Northwest Territories

US Govt. Agency/Foundation/Dept.
NSF National Science Foundation

USAF US Air Force

USDA US Department Of The Army
USFS United States Forest Service
USNIH US Public Health Services

US Private Agency/Foundation/Donor ACS American Chemical Society

AWWA American Water Works Association
MDBDF March Of Dimes Birth Defects Foundation

NGS National Geographic Society
TTU Texas Tech University

US Private Industry/Business
BM Bristol-Myers Company
PENN Pennwalt Corporation

PFIZ Pfizer Incorporated
PMI Pitman-Moore Incorporated
SERAG Seragen Incorporated

Award Codes

CFC Conference Grant
CTR Contract Research
EQP Equipment Grant
INF Infrastructure Grant
OPR Operating Grant

TTR Technology Transfer Grant

Faculty of Agriculture and Forestry

No.

Amount

Type of Award

Contracts	20							
	28	\$	675,209	NSERC	51	\$	1,464,224	
Equipment	5 175	\$	126,315	Other Provincial	97 16	\$ \$	2,240,459	
Operating Total	208	\$ \$	4,258,666 5,060,190	Other Federal Other Agencies	16 44	Ф \$	634,286 721,221	
		*	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Total	208	\$	5,060,190	
culty of Agriculture	and Forestry	7						
restigator	Project 7				Award		Amount	Agency
an	1 10,000 1	71.70			7111470		71110din	Agency
In Support of Agricultur	al Research				OPR	\$	10,000	AGCA
To Improve Forest Edu		a			OPR	\$	346,000	CFS
Genetic Variation and	Adaptation Amon	ıg Po	opulations of Loc	dgepole Pine in Alberta	OPR	\$	175,000	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	3	\$	531,000	NSERC	1	\$	175,000	
				Other Federal	2	\$	356,000	
				Total	3	\$	531,000	
partment of Agricult	tural Enginee	erin	g					
estigator	Project 7	Title			Award		Amount	Agency
ch, L								-
Wood Rheology: Time- Modes of Mechanical L		rmat	tions in Solid Wo	od Products under Various	OPR	\$	11,520	NSERC
mier, K W	.oading							
	bertson, J A (So	il Sc	ience): Residua	Effects of Previously				
Metering and Placeme	nt of Urea Super	Gra	nules		OPR	\$	11,000	AART
Metering and Placeme	nt of Urea Super	Gra	nules		OPR	\$	10,000	NORS
Energy Requirements	•			ertilizer	OPR OPR	\$ \$	10,000 7,220	
Energy Requirements of des, J J	of Pneumatic Tra	ınsp	ort of Granular F					
Energy Requirements of ddes, J J Co-investigator with You	of Pneumatic Tra oung, B A (Anima	insp al Sc	ort of Granular F ience): Thermod	ertilizer lynamics in Overwintering	OPR	\$	7,220	NSERC
Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-I	of Pneumatic Tra oung, B A (Anima	insp al Sc	ort of Granular F ience): Thermod					
Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-I	of Pneumatic Tra oung, B A (Anima ron Hot-Water H	insp al Sc	ort of Granular F ience): Thermod		OPR	\$	7,220	NSERC
Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-Irison, H P	of Pneumatic Tra oung, B A (Anima ron Hot-Water H Legged Plow	insp il Sc eatii	ort of Granular F ience): Thermod ng Pipe	lynamics in Overwintering	OPR OPR	\$	7,220 28,400	NSER(
Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-Irison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent	of Pneumatic Tra oung, B A (Anima ron Hot-Water H Legged Plow ed Floor Opitions	insp il Sc eatii	ort of Granular F ience): Thermod ng Pipe	lynamics in Overwintering	OPR OPR OPR	\$ \$ \$	7,220 28,400 5,692	ADA AART
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Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-Irison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Onard, J J Design of High Pressur	of Pneumatic Tra oung, B A (Anima ron Hot-Water H Legged Plow ed Floor Opitions Legged Plow re Air Inlets for W	insp al Sc eatir On /inte	ort of Granular Fience): Thermoong Pipe The Air Distributer Ventilation of A	lynamics in Overwintering ion Within A Bin Animal Housing	OPR OPR OPR OPR	\$ \$ \$	7,220 28,400 5,692 34,000	ADA AART ADA
Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-Irison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Onard, J J Design of High Pressur Co-investigator with Yo	of Pneumatic Tra oung, B A (Anima ron Hot-Water H Legged Plow ed Floor Opitions Legged Plow re Air Inlets for Woung, B A (Anima	inspal Sc eatin On Vinte	ort of Granular F ience): Thermoo ng Pipe The Air Distribut or Ventilation of A ience): Thermoo	lynamics in Overwintering ion Within A Bin Animal Housing lynamics in Overwintering	OPR OPR OPR OPR	\$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700	ADA AART ADA MRW
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Energy Requirements of Ides, J J Co-investigator with You Heat Loss from Black-Irison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Donard, J J Design of High Pressur Co-investigator with You Co-investigator with Felinstrumentation to Detection of Indirect Calorimestics (Co-investigator With Felinstrumentation to Detection)	of Pneumatic Tra bung, B A (Anima ron Hot-Water Hotel Legged Plow de Floor Opitions Legged Plow re Air Inlets for Woung, B A (Anima deddes, J J: Heat Lermine Actual Gra	al Sc eatin On United Loss ain L	ort of Granular F ience): Thermoong Pipe The Air Distribut or Ventilation of Aience): Thermoo of from Black-Iron Loss from Comb	lynamics in Overwintering ion Within A Bin Animal Housing lynamics in Overwintering Hot-Water	OPR OPR OPR OPR	\$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000	ADA AART ADA MRW AART
Energy Requirements of tides, J J Co-investigator with You Heat Loss from Black-Irrison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Donard, J J Design of High Pressur Co-investigator with You Co-investigator with Fe Instrumentation to Determine Tacilities	of Pneumatic Tra bung, B A (Anima ron Hot-Water Hotel Legged Plow de Floor Opitions Legged Plow re Air Inlets for Woung, B A (Anima deddes, J J: Heat Lermine Actual Gra	al Sc eatin On United Loss ain L	ort of Granular F ience): Thermoong Pipe The Air Distribut or Ventilation of Aience): Thermoo of from Black-Iron Loss from Comb	lynamics in Overwintering ion Within A Bin Animal Housing lynamics in Overwintering Hot-Water ine Straw Walkers	OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000	ADA AART ADA MRW AART
Energy Requirements of tides, J J Co-investigator with You Heat Loss from Black-Irrison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Onard, J J Design of High Pressur Co-investigator with You Co-investigator with Felinstrumentation to Determine Tacilities Eko, M M	of Pneumatic Tra bung, B A (Anima ron Hot-Water Hotel Legged Plow re Air Inlets for Woung, B A (Anima reddes, J J: Heat Lermine Actual Gra retry to Measure	onsponse al Sc eatin On Vinte Loss ain I	ort of Granular Fience): Thermoong Pipe The Air Distributer Ventilation of Aience): Thermoone from Black-Iron Loss from Combinal Heat Produc	lynamics in Overwintering ion Within A Bin Animal Housing lynamics in Overwintering Hot-Water ine Straw Walkers tion in Commercial Confinement	OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000 10,000 11,600	ADA AART ADA MRW AART
Energy Requirements of des, J J Co-investigator with You Heat Loss from Black-Irrison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Onard, J J Design of High Pressur Co-investigator with You Co-investigator with Felinstrumentation to Dete Quitty, J B Use of Indirect Calorim Facilities Eko, M M Alberta Aspen vs Black	of Pneumatic Tra bung, B A (Anima ron Hot-Water Hotel Legged Plow ed Floor Opitions Legged Plow re Air Inlets for Woung, B A (Anima eddes, J J: Heat Lermine Actual Gra etry to Measure	onsponse al Sc eatin On Vinte Loss ain I	ort of Granular F ience): Thermoong Pipe The Air Distribut or Ventilation of Aience): Thermoo ifrom Black-Iron Loss from Comb mal Heat Produc	lynamics in Overwintering ion Within A Bin Animal Housing lynamics in Overwintering Hot-Water ine Straw Walkers tion in Commercial Confinement ences. Phase I: Waferboard/OSB	OPR OPR OPR OPR OPR OPR CTR	\$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000 10,000 11,600 21,585	ADA AART ADA MRW AART AGCA NSERG
Energy Requirements of the states, J J Co-investigator with You Heat Loss from Black-Investigation of a Bent The Effect Of Perforate Investigation of a Bent Donard, J J Design of High Pressur Co-investigator with You Co-investigator with You Co-investigator with Fel Instrumentation to Dete Quitty, J B Use of Indirect Calorim Facilities Eko, M M Alberta Aspen vs Black Type of Award	of Pneumatic Trace oung, B A (Animal ron Hot-Water Hotel House Plowed Plower Pl	al Sc eatin On Vinte al Sc Loss ain I Anir	ort of Granular F ience): Thermoong Pipe The Air Distributer Ventilation of Aience): Thermoof from Black-Iron Loss from Comb and Heat Producted Quality Difference Amount	lynamics in Overwintering ion Within A Bin Animal Housing lynamics in Overwintering Hot-Water ine Straw Walkers tion in Commercial Confinement ences. Phase I: Waferboard/OSB Source of Funds	OPR OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000 10,000 11,600 21,585 Amount	ADA AART ADA MRW AART AGCA NSERG
Energy Requirements of the state of the stat	of Pneumatic Trace oung, B A (Animal ron Hot-Water Hotel House Plowed Plower Air Inlets for Woung, B A (Animal Eddes, J J: Heat Lermine Actual Grace Poplar Wood/Plower Poplar Wood/Plow	al Sceatili On On Interest Anir rodu	ort of Granular F ience): Thermoong Pipe The Air Distribut or Ventilation of Aience): Thermoo from Black-Iron Loss from Comb and Heat Product act Quality Differed Amount 21,585	lynamics in Overwintering ion Within A Bin Animal Housing Ilynamics in Overwintering Hot-Water ine Straw Walkers tion in Commercial Confinement ences. Phase I: Waferboard/OSB Source of Funds NSERC	OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000 10,000 11,600 21,585 Amount 30,340	ADA AART ADA MRW AART AGCA NSERG
Energy Requirements of des, J J Co-investigator with You Heat Loss from Black-Irrison, H P Investigation of a Bent The Effect Of Perforate Investigation of a Bent Donard, J J Design of High Pressur Co-investigator with You Co-investigator with You Co-investigator with Felinstrumentation to Determine Facilities Cko, M M Alberta Aspen vs Black Type of Award Contracts Operating	of Pneumatic Tra oung, B A (Anima ron Hot-Water Hotel Legged Plow ed Floor Opitions Legged Plow re Air Inlets for Woung, B A (Anima eddes, J J: Heat Lermine Actual Gra etry to Measure of Poplar Wood/Proceedings 1 11	On Vintee Loss ain L Anir S \$	ort of Granular F ience): Thermoong Pipe The Air Distributer Ventilation of Aience): Thermoof from Black-Iron Loss from Comb and Heat Product Cuality Differed Amount 21,585 148,132	lynamics in Overwintering ion Within A Bin Animal Housing Ilynamics in Overwintering Hot-Water ine Straw Walkers tion in Commercial Confinement ences. Phase I: Waferboard/OSB Source of Funds NSERC Other Provincial	OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000 11,600 21,585 Amount 30,340 113,677	ADA AART ADA MRW AART AGCA NSERG
Energy Requirements of ddes, J J Co-investigator with You Heat Loss from Black-Investigation of a Bent The Effect Of Perforate Investigation of a Bent Onard, J J Design of High Pressur Co-investigator with You Co-investigator with You Co-investigator with Felinstrumentation to Detect County, J B Use of Indirect Calorim Facilities Cko, M M Alberta Aspen vs Black Type of Award Contracts	of Pneumatic Trace oung, B A (Animal ron Hot-Water Hotel House Plowed Plower Air Inlets for Woung, B A (Animal Eddes, J J: Heat Lermine Actual Grace Poplar Wood/Plower Poplar Wood/Plow	al Sceatili On On Interest Anir rodu	ort of Granular F ience): Thermoong Pipe The Air Distribut or Ventilation of Aience): Thermoo from Black-Iron Loss from Comb and Heat Product act Quality Differed Amount 21,585	lynamics in Overwintering ion Within A Bin Animal Housing Ilynamics in Overwintering Hot-Water ine Straw Walkers tion in Commercial Confinement ences. Phase I: Waferboard/OSB Source of Funds NSERC	OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	7,220 28,400 5,692 34,000 5,700 13,000 10,000 11,600 21,585 Amount 30,340	AART ADA MRW AART AGCA

Source of Funds

No.

Department of Animal Science

Investigator	Project Title	Award		Amount	Agency
Aherne, F X					
-	Reproductive Problems in Swine Herds	OPR	\$	5,300	AART
Influence of Fee Reproductive Pe	d Level and Body Condition Between Weaning and Mating on Sow erformance	OPR	\$	12,416	AART
An Evaluation of	the Nutritive Value of Full Fat Canola Seed for Young Pigs	OPR	\$	11,626	AART
Management of	Reproductive Problems in Swine Herds	OPR	\$	10,620	APPM
Interaction Betw Performance	een Feed Intake During Lactation and Pregnancy and Sow Reproductive	OPR	\$	70,900	ARCA
An Evaluation of	the Nutritive Value of Full Fat Canola Seed for Young Pigs	OPR	\$	10,569	CCC
The Etiology of I	Degenerative Joint Abnormalities and Leg Weakness in Swine	OPR	\$	35,682	NSERC
Baracos, V E	e Feeding Value of Damaged Grains for Livestock	OPR	\$	40,000	WGRF
	sm During Fever and Infection in Domestic Livestock	OPR	\$	53,100	ARCA
_	otein Metabolism in the Tumor-Bearing Host	OPR	\$	15,875	NCI
	th and Atrophy of Skeletal Muscle	OPR	\$	15,360	NSERC
Co-investigator v	with Thompson, J R: Spectrofluorimenter				
	with Christopherson, R J: Refrigerated Centrifuge				
Berg, R T	le in Ceu Cell Custerne	000	Φ.	44.000	4004
Christopherson, R J	ls in Cow Calf Systems	OPR	\$	11,000	ARCA
	on Energy Metabolism, Appetite and Cold Tolerance	OPR	\$	30,000	ARCA
	perature on Protein and Amino Acid Digestion in Ruminants	OPR	\$	34,000	ARCA
	with Thompson, J R: Regulation of Skeletal Muscle Protein		*	0.,000	
	tion and Metabolism in Animals	OPR	\$	24,960	NSERC
Refrigerated Ce		EQP	\$	22,075	NSERC
Co-investigator	with Thompson, J R: Spectrofluorimenter		•	,	
Hudson, R J					
	nagement of Wapiti	OPR	\$	29,000	ARCA
	ergetics of Native Ruminants	OPR	\$	24,000	NSERC
Kennelly, J J	nia on the Preservation, and the Nutritive Value of High Moisture Barley	OPR	\$	9.000	AART
Storage of High	·	OPR	Ф \$	8,990 6,000	AART
	e for Dairy Cattle - Mode of Action and Effect on Milk Production and	OPR	\$	80,000	ARCA
	ing the Efficiency of Protein (amino acids) and Energy Utilization by Dairy	OPR	\$	65,000	ARCA
	oding and Extrusion on the Nutritive Value of Canola Meal and Whole	OPR	\$	16,000	ccc
Storage of High	·	OPR	æ	12.000	CII
	mbinant Bovine Somatotropin (bSTH) Injected Daily in Lactating Dairy Cows	CTR	\$ \$	12,000 47,552	CIL CYAN
at 2 Dosage Lev	rels	OIII	Ψ	47,332	CTAN
•	mbinant Bovine Somatotropin (BST) in Lactating Dairy Cows	CTR	\$	40,600	CYAN
	nia on the Preservation, and the Nutritive Value of High Moisture Barley	OPR	\$	8,000	IOL
	nents as Markers in Digestive Physiology	OPR	\$	26,880	NSERC
	with Aherne, F X: Evaluation of the Feeding Value	0,	*	20,000	1102/10
Makarechian, M	g				
Mathison, G W	with Price, M A: The Influence of Pre and Post Weaning				
	with Kennelly, J J: Storage of High Moisture Grain				
	ans in Barley on Digestion and Metabolism in Ruminants	OPR	\$	28,000	ARCA
	ncies of Ruminants	OPR	\$	28,000	ARCA
	utritive Value of Straw	OPR	\$	17,800	ARCA
	with Christopherson, R J: Refrigerated Centrifuge with Aherne, F X: Evaluation of the Feeding Value				

Investigator	Project Tit	tle		Award		Amount	Agency
rice, M A							
Seasonal Changes in Providence, N.W.T.			cKenzie Bison Sanctuary, Fort	OPR	\$	13,125	AART
Studies on the Effects	s of RALGRO on Co	ow Reproduction a	and Growth of Calves	OPR	\$	3,500	AART
The Use of Young Bo	ars in Commercial	Pork Production		OPR	\$	6,825	AART
The Influence of Pre a Heifers	and Post Weaning (Growth Rate, Rep	roductive Performance of Beef	OPR	\$	37,000	ARCA
Seasonal Changes in Providence, N.W.T.	Body Composition	of Bison in the Mo	cKenzie Bison Sanctuary, Fort	OPR	\$	20,000	GNWT
Studies on the Effects tobblee, A R	s of RALGRO on Co	ow Reproduction a	and Growth of Calves	OPR	\$	7,000	IMC
Co-investigator with C Laboratory	Crawford, R J (Scier	nce, Chemistry): N	Mass Spectrometry Service				
almon, R K Molecular Analysis of Cattle	the Superior Growt	th Characteristics	in a Growth-Selected Line of	OPR	\$	25,200	AART
auer, W C							
Protein and Amino Ad	•			OPR	\$	32,000	ARCA
	•	_	Supply of Amino Acids	OPR	\$	40,290	ARCA
Determination of Ami Feedstuffs for Pigs	no Acid Digestibilitie	es with the 15N-Is	otope Dilution Technique in	OPR	\$	40,290	ARCA
Nutrition in Pigs	ritional Factors on F	Pancreatic Enzyme	e Secretion and Amino Acid	OPR	\$	29,043	NSERC
hires, A Co-investigator with A	Aherne, F X: Evalua	ition of the Feedin	g Value				
im, J S Sequential Morphomore Disorders in Commer		Study of Tibial Bor	ne and Etiology of Twisted Leg	OPR	\$	26,000	AART
Hyaluronic Acid Prod		Waste Materials		OPR	\$	10,560	AGCA
Egg Yolk Product De				CTR	\$	68,626	CEMA
Lecithin Separation fr		ueous Extraction	Method	OPR	\$	50,000	NSERC
Regulation of Skeleta	ıl Muscle Protein Gr	owth in Cattle		OPR	\$	56,000	ARCA
Protein Turnover in S Co-investigator with 0		· Refrigerated Cer	ntrifuge	OPR	\$	16,000	NSERC
Spectrofluorimenter	51111010011, 11 0	. Homgoratou oo	munugo	EQP	\$	19,740	NSERC
oung, B A Thermodynamics in C	Overwintering Bee C	Colonies		OPR	\$	10,438	AART
Thermodynamics in C	•			OPR	\$	8,000	ABA
Within and Between I				OPR	\$	38,000	ARCA
Environmentally Indu Co-investigator with (•	~		OPR	\$	15,000	NSERC
Co-investigator with (Assembly for Existing		ne Economics, Fo	ods and Nutrition): Bellows				
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts		\$ 156,778	NSERC	11	\$	278,740	
Equipment		\$ 41,815	Other Provincial	28	\$	819,800	
Operating Total		\$ 1,215,349 \$ 1,413,942	Other Federal Other Agencies	1 13	\$ \$	10,560 304,842	
Total	55	4 1,413,342	Total	53	\$	1,413,942	
Department of Entom	ology						
Department of Entom nvestigator	l ology Project Ti	itle		Award		Amount	Agency
Ball, G E				OPR	 \$	48,000	NSERC
Studies in Insect Tax Craig, D A				OPR	ъ \$	17,280	NSERC
Biology of Aquatic Ins Evans, W G Co-investigator with		Science): Thermo	odynamics in Overwintering	OFR	Φ	17,200	NOERU
Co-investigator with	- '	·	Mass Spectrometry Service				
Laboratory Chemical ecology of	predatory soil insec	et guilds		OPR	\$	10,000	NSERC
3,		<u>~</u>					

m leming, Si angor, l Ci ditchell, Si Spence,	ryptophan Metabolism, Ronorsitans) B S tudies in Insect Structure	enroduction and			Award		Amount	Agency
Tr m eming, Si angor, I C itchell, Si pence,	ryptophan Metabolism, Ronorsitans) B S tudies in Insect Structure	enroduction and						
m eming, Si angor, I Ci itchell, Si pence,	norsitans) , B S itudies in Insect Structure		Hybrid Sterility is	n the Tsetse Fly (Glossina	OPR	\$	36,480	NSERC
Si ingor, I Ci itchell, Si pence,	tudies in Insect Structure	,	,,	, (•	,	
ingor, i Ci itchell, Si pence,					000	•	7.400	NOEDO
itchell, Si Dence,	I J VV	and Developme	nτ		OPR	\$	7,123	NSERC
i tchell, Si cence ,	o-investigator with Spend	e, J R: Host Effe	ects on Genetics	and Behaviour				
oence,	BK							
	tudies on Insect Chemore	eception			OPR	\$	20,836	NSERC
	lost Effects on Genetics a	nd Behaviour of	the Mountain Pir	ne Beetle	OPR	\$	8,221	AFDRT
				Differentiation of the Mountain	CTR	\$	17,730	CFS
	ine Beetle in Southwester		,			•	,	
			Forestry): Genet	ic Variation and Adaptation				
St	tudies in Insect Population	n Biology			OPR	\$	27,500	NSERC
T	ype of Award	No.	Amount	Source of Funds	No.		Amount	
_	Contracts	1 \$	17,730	NSERC	7	\$	167,219	
0	perating	8 \$	175,440	Other Provincial	1	\$	8,221	
Te	otal	9 \$	193,170	Other Federal	1	\$	17,730	
				Total	9	\$	193,170	
epart	ment of Food Scier	nce						
vestiga	ntor	Project Title			Award		Amount	Agency
ıdziyev	v, D							
C	o-investigator with Ozime o-investigator with Stiles,	M E: Ultracentr	fuge	•				
	arinaceous Properties of	Alberta Cereals	and Pulses Subje	ected to Dry Extrusion	CTR	\$	20,600	UFL
len, P U	Utrafiltration of Cottage Ch	neese Whey for	New Dairy Produ	ct Use	OPR	\$	8,288	AART
	roperties and Reactions o	•	-		OPR	\$	29,194	NSERC
U	Iltrafiltration of Cottage Ch	neese Whey for	New Dairy Produ	ct Use	OPR	\$	8,500	PALM
Magu		0. =			000	•		
	ingineering Development		•	drocooling Process	OPR	\$	36,000	ARCA
ا۱۷ raikul	fligration of Solutes During I. B	y water Hemova	ii in Foodstutis		OPR	\$	21,000	NSERC
	ood Sauce from Canola N	∕leal			OPR	\$	12,325	AART
F	ood Sauce from Canola N	Meal			OPR	\$	5,000	AFP
		and Its Use in P	reventing Non-E	nzymatic Browning in Potato	OPR	\$	35,000	ARCA
	Products							
	Co-investigator with Ozime			л High				
ں .imek	Co-investigator with Stiles, L	ivi E: Uitracentr	iuge					
	Physico-Chemical Properti	es of Ultrafiltrati	on Milk Retentate	es for Cheesemaking	OPR	\$	14,000	AART
	or the Purchase of a Vari			<u> </u>	EQP	\$	35,000	NSERC
		ol Droboo -4 84 -	noomino Outsta	•	ODD	ф	04.000	NOCEO
lcic, N	sotopic and Stereochemic				OPR	\$	21,696	NSERC
l cic, N Is	O-invoctiontor with Linda.	gaui, O (Science	, onemistry). De	velopitient of ELISA Assays				
Ilcic, N Is C	co-investigator with Hindse		rchase of a Varia	n High				
I lcic, M Is C fo	or	ek, L: For the Pu		<u> </u>				
nicic, M Is C fo C								
alcic, N Is C fo C C C corns,	or Co-investigator with Ozime Co-investigator with Stiles, P	M E: Ultracentr	fuge					
alcic, M Is C fo C C porns, In A	or Co-investigator with Ozime Co-investigator with Stiles, P nvestigation of pH and Te unalysis of Intermediates	M E: Ultracentr	ifuge ts on Maillard Re	action Mechanisms Using HPLC	OPR	\$	9,600	NSERC
alcic, M Is C fo C C C C C C Oorns, In A	or Co-investigator with Ozime Co-investigator with Stiles, P nvestigation of pH and Te analysis of Intermediates Co-investigator with Stiles,	M E: Ultracentr mperature Effec M E: Ultracentr	ifuge ts on Maillard Re ifuge	•	OPR	\$	9,600	NSERC
alcic, M Is C fo C C porns, In A C	or Co-investigator with Ozime Co-investigator with Stiles, P nvestigation of pH and Te analysis of Intermediates Co-investigator with Stiles, Co-investigator with Ozime	M E: Ultracentr mperature Effec M E: Ultracentr	ifuge ts on Maillard Re ifuge	•	OPR	\$	9,600	NSERC
alcic, M Is C fo C C porns, In A C C	or Co-investigator with Ozime Co-investigator with Stiles, P nvestigation of pH and Te analysis of Intermediates Co-investigator with Stiles, Co-investigator with Ozime	M E: Ultracentr mperature Effect M E: Ultracentrek, L: For the Pu	ifuge ts on Maillard Re ifuge rchase of a Varia	n High	OPR	\$	9,600 13,177	NSERC

	F H							
	Evaluation of the Effects Emulsions	of Non-meat Ingr	edients on Function	onal Properties of Meat	OPR	\$	16,000	ARCA
		ulation on Calciun	n Activated Neutra	al Protease and Z-disc Actin in	OPR	\$	69,000	ARCA
	Physicochemical Studies	s on Food Proteins	and Myosystem	s	OPR	\$	15,582	NSERC
	Co-investigator with Stile				0171	Ψ	13,302	NOLITO
	_		· ·					
-	Type of Award	No.	Amount	Source of Funds	No.		Amount	
	Contracts Equipment	1 \$ 2 \$	20,600 72,000	NSERC Other Provincial	8 7	\$	182,249	
	Operating	15 \$	72,000 314,362	Other Agencies	3	\$ \$	190,613 34,100	
	Total	18 \$	406,962	Total	18	\$	406,962	
Depar	tment of Forest So	cience						
Investig		Project Title)		Award		Amount	Agency
Beck, J		nt Sample Plots a	nd Perform Maint	enance as Necessary at	CTR	\$	26,000	AENR
	Stem Analysis				CTR	\$	6,000	AENR
	Maintenance of Permane	ent Sample Plots			CTR	\$	20,000	AENR
	Remeasurement of Perm	•			CTR	\$	15,000	AENR
F	Locate and Measure Fiel Photography	·		Experimental Aerial	CTR	\$	20,000	AF
	An Economic Analysis of	f the Alberta Timb	er Supply		CTR	\$	80,000	AGCA
Dancik,	, ธ P Co-investigator with Higg	ninhotham K O· M	lycorrhizal Inocul	ım Production				
	PRUF Program - Early P		-	ann roddellon	CTR	\$	47.902	AGCA
E	Editorial Support Service	es - To Cover the (Cost of Editorial S	upport Services and Incidental n Journal of Forest Research	CTR	\$	40,000	NRC
				ic Variation and Adaptation				
\	Very Early Evaluation of	Conifer Family Gr	owth at Harvest A	\ge	OPR	\$	60,000	NSERC
	Mating System and Sele	ction Components	of Conifers		OPR	\$	19,500	NSERC
Hellum,	, A K Seed From Spruce Resid	duals on Cutovers	in Central Alberts	2	OPR	\$	13,650	AFDRT
	ootham, K O	duais on Outovers	in Central Alberta	1	OFR	Φ	13,030	AFUNI
Hiratsul					CTR	\$	9,254	AF
Lieffers		r, W A (Science, C	Chemistry): Phyto	chemical Investigation of				
	Effects of Change in Wat	ter Table Height o	n Peatland Black	Spruce and Tamarack	OPR	\$	15,000	NSERC
	A Study to Analyze Alter	natives for Wood	Bison Manageme	nt in Banff National Park	CTR	\$	5,000	PC
	Evapotranspiration Regir				CTR	\$	9,592	AENR
	Field Evaluation of an Er				OPR	\$	6,600	AFDRT
	Freeze/Thaw Cycles on a				OPR	\$	8,790 5,000	AFDRT
C	of Non-Point Silvicultural	Sources (WREN	SS) for Application		CTR	\$	5,099	AGCA
Titus, S	PRUF Program - Validati 3 J	ing whenss for	application to Car	iadian watersheds	CTR	\$	5,000	CFS
[Development of a Stem A				OPR	\$	3,000	AFDRT
	An Evaluation of Bayesia	an Estimation Prod	edures Applied to	Log Scaling Inventory	OPR	\$	4,800	NSERC
		esidue on Lodgep	ole Pine, Engelm	ann Spruce and Subalpine Fir	OPR	\$	7,680	NSERC
Yeh, F	C							
	Genetic Structure of Fore Co-investigator with Dea		Forestry): Genet	ic Variation and Adaptation	OPR	\$	28,000	NSERC

Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	13	\$	288,847	NSERC	6	\$	134,980	
Operating	10	\$	167,020	Other Provincial	11	\$	137,886	
Total	23	\$	455,867	Other Federal	6	\$	183,001	
			•	Total	23	\$	455,867	
						•	,	
Department of Plant Scien	ce							
Investigator	Project	Title			Award		Amount	Agency
Andrew, W T								
Regional Potato Cultivar Ev Bailey, A W Effect of Croxing on Plains					OPR	\$	36,000	ARCA
Effect of Grazing on Plains	•				OPR	\$	10,000	AGCA
Alberta				gh Fescue Rangeland in Central	OPR	\$	44,000	ARCA
The Impacts of Grazing on t	_		-		OPR	\$	45,000	NOVA
Application	•	·	ore Application	ı, and Oil- Suspended Spore	CTR	\$	30,888	AENR
Effect of Soil Factors on Arn					OPR	\$	9,538	AFDRT
PRUF Program - Epidemiok		llaria	Root Rot in Alb	erta	CTR	\$	24,995	CFS
Epidemiology of Western G Briggs, K G					OPR	\$	16,692	NSERC
Varietal testing of cereal and		•			OPR	\$	24,500	ADA
Studies of Extreme Strong S		gth in	Semidwarf 6 R	low Barley	OPR	\$	28,000	ARCA
Intensive Culture of Wheat i					CTR	\$	41,500	CGC
Genetic Studies of Aluminur	n Tolerant '	Whea	ts		OPR	\$	14,617	NSERC
Co-investigator with Taylor, Aluminum	G J (Sciend	ce, Bo	otany): Basic ar	nd Applied Aspects of				
Evaluation of Early Maturing of Western Canada	ı, High Yiek	ding V	Vheats Bred Sp	pecifically for the Parkland Area	OPR	\$	46,600	WGRF
Hiruki, C								
Improved Diagnostic Techni Approach			-		OPR	\$	9,000	AART
Improved Molecular Diagno		•			OPR	\$	44,400	ARCA
 Fungus Transmission of I Organisms 	Plant Viruse	es 2) F	Plant Diseases	Associated with Mollicutes	OPR	\$	38,400	NSERC
Identification and Control of	Major Virus	s Dise	ases of Forage	Legume Crops	OPR	\$	33,900	NSERC
Characterization of the Ager	nt Causing '	Whea	t Spot Mosaic I	Disease in Alberta	OPR	\$	28,000	WGRF
King, J R				0	000	•		
Seed Production and Soil Se	-				OPR	\$	14,710	AART
	-			on in Albertan Native Range	OPR	\$	17,590	ARCA
Germination and Establishm	ent of Past	ure G	irass Species		OPR	\$	32,250	ARCA
Knowles, N R Controlling Tuber Yield and Seed-Tubers	Grade by N	/lanip	ulating the Phys	siological Age of Potato	OPR	\$	23,688	AART
Physiological Aging and Ser Kondra, Z P	nescence o	f Pota	to Seed Tubers	S	OPR	\$	10,866	NSERC
Clonal Propagation of Cano	la				OPR	\$	12,376	AART
Clonal Propagation of Cano					OPR	\$	6,000	AWP
Agronomic Evaluation of Ea		Hial	h Vielding Cand	ola for Western Canada	OPR	\$	51,500	WGRF
Nagarajan, P Co-investigator with Walton,			-		0/11	Ψ	31,300	Walli
Saini, H S	. 5.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ب ى	Jiday or C					
Co-investigator with Tittle, F Spencer, M E	L: In Vitro	Selec	tion for Enhanc	ed				
Anaerobic Biological Degrac Ethylene and Plants	lation of Ha	zardo	ous Organic Ch	emicals	OPR OPR	\$ \$	17,250 70,862	AERT NSERC
Co investigator with Tittle E	Luin Vitro	Calaa	tion for Enhanc	ond				

Type of Award

No.

Co-investigator with Tittle, F L: In Vitro Selection for Enhanced . . .

Amount

Source of Funds

No.

nvestigator	Project	Title			Award		Amount	Agency
ewari, J P								
Colonization of Barley in	Alberta by the	'Bio	logical Fertilizers	•	OPR	\$	8,925	AART
The Mechanism of Necro	_				OPR	\$	10,000	AGCA
Seedling Blight of Canola		щ	0.0,0.0.0.0		OPR	\$	57,340	ARCA
5 5		e Ci	hemistry): Investi	gation of American Leaf	•	*	G., , G., G	
				eed Caused by Alternaria	OPR	\$	15,000	NSERC
brassicae	in the Blackop	, O. D	nocuse of hapest	ood oddood by rittornana	0111	Ψ	.0,000	1102110
ittle, F L								
	nanced Winter	Hard	diness in Perenni	al Ryegrass (Lolium perenne)	OPR	\$	1,108	UNGG
oop, E W			1000/07	6 #00 00 to #E0 00	OPR	\$	95	MISC
Bedding Plant Trials, cor anden Born, W H	itributions for y	ear	1966/67 ranged i	10111 \$20.00 to \$50.00	OPN	Ф	90	MISC
Canola Yield Losses Due	e to Weeds				OPR	\$	9,400	AART
		Env	rironmental Varial	bles on Herbicide Efficacy	OPR	\$	20,900	ARCA
Contribution towards He					OPR	\$	1,500	CYAN
Chlorsulfuron Mechanisr			tabolism Researd	ch	OPR	\$	11,500	DUP
Growth of Brassica camp					CTR	\$	4,500	LSC
Behavior and Fate of Sy					OPR	\$	20,301	NSERC
Growth Regulators in Wi					OPR	\$	21,800	WGRF
Herbicide Efficacy	and Dane	,			OPR	\$	12,000	WGRF
Valton, P D					0	Ψ	. =,500	
Forage Productivity from	Disturbed Are	as			OPR	\$	12,000	AART
New Species of Grasses					OPR	\$	12,000	AART
A Comparative Study of	Genetic Variat	ion I	Induced by Pan-N	Mixis and Tissue Culture	OPR	\$	10,000	AGCA
•				oscope with dual head and	EQP	\$	12,500	NSERC
reflected light fluorescen	ce attachment	, BH	12-RFL-1					
Type of Award	No.		Amount	Source of Funds	No.		Amount	
					_			
Contracts	4	\$	101,883	NSERC	9	\$	233,138	
Equipment	1	\$	12,500	Other Provincial	20	\$	464,755	
Equipment Operating	1 41	\$ \$	12,500 909,608	Other Provincial Other Federal	20 4	\$ \$	464,755 54,995	
Equipment	1	\$	12,500	Other Provincial Other Federal Other Agencies	20 4 13	\$ \$ \$	464,755 54,995 271,103	
Equipment Operating	1 41	\$ \$	12,500 909,608	Other Provincial Other Federal	20 4	\$ \$	464,755 54,995	
Equipment Operating Total	1 41 46	\$ \$	12,500 909,608	Other Provincial Other Federal Other Agencies	20 4 13	\$ \$ \$	464,755 54,995 271,103	
Equipment Operating Total Department of Rural Ec	1 41 46	\$ \$ \$	12,500 909,608 1,023,991	Other Provincial Other Federal Other Agencies	20 4 13	\$ \$ \$	464,755 54,995 271,103	Agency
Equipment Operating Total Department of Rural Ecurostigator	1 41 46 onomy	\$ \$ \$	12,500 909,608 1,023,991	Other Provincial Other Federal Other Agencies	20 4 13 46	\$ \$ \$	464,755 54,995 271,103 1,023,991	Agency
Equipment Operating Total Department of Rural Econyestigator	1 41 46 onomy Project	\$ \$ T itle	12,500 909,608 1,023,991	Other Provincial Other Federal Other Agencies Total	20 4 13 46	\$ \$ \$	464,755 54,995 271,103 1,023,991	Agency
Equipment Operating Total Department of Rural Ecury Expressing Expression Adamowicz, W L	onomy Project eman, M M: Pe	\$ \$ Title	12,500 909,608 1,023,991 nance of the Rap	Other Provincial Other Federal Other Agencies Total	20 4 13 46	\$ \$ \$	464,755 54,995 271,103 1,023,991	Agency
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil	onomy Project eman, M M: Pe	\$ \$ Title	12,500 909,608 1,023,991 mance of the Rap and Work on the R	Other Provincial Other Federal Other Agencies Total Description Desc	20 4 13 46 Award	\$ \$ \$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i>	
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural	onomy Project eman, M M: Pe llips, W E: To E	\$ \$ Title	12,500 909,608 1,023,991 mance of the Rap and Work on the R	Other Provincial Other Federal Other Agencies Total Description Desc	20 4 13 46	\$ \$ \$	464,755 54,995 271,103 1,023,991	Agency ALED
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grad	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student,	\$ \$ \$ Title rform Exter	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura	Other Provincial Other Federal Other Agencies Total Description D	20 4 13 46 <i>Award</i>	\$ \$ \$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i>	
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grad	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student,	\$ \$ \$ Title rform Exter	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura	Other Provincial Other Federal Other Agencies Total Description Desc	20 4 13 46 Award	\$ \$ \$ \$ \$ \$ \$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i>	ALED
Equipment Operating Total Department of Rural Econyestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grad Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for	\$ \$ \$ Title rform Exter Dane Mar Ir Joi	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the	Other Provincial Other Federal Other Agencies Total Description D	20 4 13 46 <i>Award</i> CTR	\$\$\$\$ \$\$\$\$\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900	ALED ALED
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grad Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for	\$ \$ \$ Title rform Exter Dane Mar Ir Joi	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the	Other Provincial Other Federal Other Agencies Total Description D	20 4 13 46 <i>Award</i>	\$ \$ \$ \$ \$ \$ \$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i>	ALED
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grad Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Hawkins, M H	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, the Potential for	\$ \$ Title rform Exter Dane Mar In Joi	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the	Other Provincial Other Federal Other Agencies Total Desceed Futures Descent Sesearch Descent Sesearch Sesearch Alberta Descent Sesearch Sesearc	20 4 13 46 <i>Award</i> CTR	\$\$\$\$ \$\$\$\$\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900	ALED ALED
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Vee Co-investigator with Phila Idamowicz, L P The Impact of Structural Agricultural Trade - Grade Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Hawkins, M H Co-investigator with Lere	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for	\$ \$ \$ Title rform Exter Dane Mar or Joi	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the ement Systems in of Inspection, Gr	Other Provincial Other Federal Other Agencies Total Desceed Futures Descent Sesearch Descent Sesearch Sesearch Alberta Descent Sesearch Sesearc	20 4 13 46 Award CTR CTR	\$ \$ \$ \$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000	ALED ALED ARCA
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Vee Co-investigator with Phil Inpedaile, L P The Impact of Structural Agricultural Trade - Grad Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Ilawkins, M H Co-investigator with Len Impact of Lamb Imports	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for	\$ \$ \$ Title rform Exter Dane Mar or Joi	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the ement Systems in of Inspection, Gr	Other Provincial Other Federal Other Agencies Total Desceed Futures Descent Sesearch Descent Sesearch Sesearch Alberta Descent Sesearch Sesearc	20 4 13 46 <i>Award</i> CTR	\$\$\$\$ \$\$\$\$\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900	ALED ALED
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Phila Ipedaile, L P The Impact of Structural Agricultural Trade - Grad Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Iawkins, M H Co-investigator with Len Impact of Lamb Imports Interectors	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for of Tillage Mar ohl, M L: Influe on the Alberta	\$ \$ Title rform Exter pane Mar or Joi nage ence Lan	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the ement Systems in of Inspection, Gra blindustry	Other Provincial Other Federal Other Agencies Total Desceed Futures Descend Future Japan/ Alberta Desceed Industry - Graduate The Dark Brown Soil Zone Descend From Soil Zone	20 4 13 46 Award CTR CTR OPR	\$\$\$\$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000	ALED ALED ARCA ASWC
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Vee Co-investigator with Phil Inpedaile, L P The Impact of Structural Agricultural Trade - Grad Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Idawkins, M H Co-investigator with Len Impact of Lamb Imports Influence of Inspection,	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for n of Tillage Mar ohl, M L: Influe on the Alberta Grading and M	\$ \$ Title rform Exter Dane Mar or Joi nage Lan	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the ement Systems in of Inspection, Gra and Industry et Promotion on the	Other Provincial Other Federal Other Agencies Total Desceed Futures	20 4 13 46 Award CTR CTR OPR OPR	\$\$\$\$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255	ALED ALED ARCA ASWC AART
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Vee Co-investigator with Phil Inpedaile, L P The Impact of Structural Agricultural Trade - Grade Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Iawkins, M H Co-investigator with Len Impact of Lamb Imports Influence of Inspection, The Impact of Grain Price	onomy Project eman, M M: Pe llips, W E: To E Change in Jarduate Student, The Potential for of Tillage Man ohl, M L: Influe on the Alberta Grading and Mo	\$ \$ Title rform Exter Dane Mar Mar Mar Mar Mar Mar Mar Mar Mar Mar	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture or i L Nakamura int Ventures in the ement Systems in of Inspection, Gra inb Industry et Promotion on the rta Farmer Return	Other Provincial Other Federal Other Agencies Total Descend Futures Descend Futures Descend Future Japan/ Alberta Descend Industry - Graduate Descend Brown Soil Zone Descend Future Japan/ Alberta Descend From Soil Zone Descend From Soil Zo	20 4 13 46 Award CTR CTR OPR	\$\$\$\$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000	ALED ALED ARCA ASWC
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Vee Co-investigator with Philapedaile, L P The Impact of Structural Agricultural Trade - Grace Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Impact of Lamb Imports Impact of Lamb Imports Influence of Inspection, The Impact of Grain Price Co-investigator with Bau	onomy Project eman, M M: Pe llips, W E: To E Change in Jar duate Student, The Potential for n of Tillage Mar ohl, M L: Influe on the Alberta Grading and M ce Pooling on Auer, L: An Ecor	\$ \$ Title rform Exter Dane Mar Mar Mar Mar Mar Mar Mar Mar Mar Mar	12,500 909,608 1,023,991 mance of the Raped Work on the Rese Agriculture on the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agriculture of Inspection, Grant Inspection, Grant Industry et Promotion on the Rese Return the Reserve Return the Reserve Return to Evaluation of Times Reserve Reserve Return to Evaluation of Times Reserve Rese	Other Provincial Other Federal Other Agencies Total Deseed Futures Desearch Desearch Desearch Industry - Graduate Desearch Brown Soil Zone Desearch adding Desearch Soil Patterns Demand for Grain Desearch Soil Patterns	20 4 13 46 Award CTR CTR OPR OPR OPR	\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255 22,900	ALED ALED ARCA ASWC AART ARCA
Equipment Operating Total Department of Rural Econvestigator Idamowicz, W L Co-investigator with Vee Co-investigator with Philapedaile, L P The Impact of Structural Agricultural Trade - Grace Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation An Economic Evaluation Hawkins, M H Co-investigator with Len Impact of Lamb Imports Lerohl, M L Influence of Inspection, The Impact of Grain Price Co-investigator with Baulnfluence of Inspection,	onomy Project eman, M M: Pe llips, W E: To E Change in Jar duate Student, The Potential for n of Tillage Mar ohl, M L: Influe on the Alberta Grading and M ce Pooling on Auer, L: An Ecor	\$ \$ Title rform Exter Dane Mar Mar Mar Mar Mar Mar Mar Mar Mar Mar	12,500 909,608 1,023,991 mance of the Raped Work on the Rese Agriculture on the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agriculture of Inspection, Grant Inspection, Grant Industry et Promotion on the Rese Return the Reserve Return the Reserve Return to Evaluation of Times Reserve Reserve Return to Evaluation of Times Reserve Rese	Other Provincial Other Federal Other Agencies Total Deseed Futures Desearch Desearch Desearch Industry - Graduate Desearch Brown Soil Zone Desearch adding Desearch Soil Patterns Demand for Grain Desearch Soil Patterns	20 4 13 46 Award CTR CTR OPR OPR	\$\$\$\$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255	ALED ALED ARCA ASWC AART
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grace Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Hawkins, M H Co-investigator with Len Impact of Lamb Imports Lerohl, M L Influence of Inspection, The Impact of Grain Pric Co-investigator with Bau Influence of Inspection, Manning, T W	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for n of Tillage Man ohl, M L: Influe on the Alberta Grading and M ce Pooling on A uer, L: An Ecor Grading and M	\$ \$ Title rform Exter Dane Mar Mar Marke Albei nomi	12,500 909,608 1,023,991 mance of the Raped Work on the Rese Agriculture on the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agriculture of Inspection, Grant Inspection, Grant Inspection on the Research Res	Other Provincial Other Federal Other Agencies Total Desert Futures Desert Future Japan/ Alberta Desert Future Japan/ Alberta Desert Future Federal Desert Future Japan/ Alberta Desert	20 4 13 46 Award CTR CTR OPR OPR OPR	\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255 22,900	ALED ARCA ASWC AART ARCA
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grace Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Hawkins, M H Co-investigator with Len Impact of Lamb Imports Lerohl, M L Influence of Inspection, The Impact of Grain Pric Co-investigator with Bau Influence of Inspection, Manning, T W Co-investigator with Phi	onomy Project eman, M M: Pe llips, W E: To E Change in Jap duate Student, The Potential for n of Tillage Man ohl, M L: Influe on the Alberta Grading and M ce Pooling on A uer, L: An Ecor Grading and M	\$ \$ Title rform Exter Dane Mar Mar Marke Albei nomi	12,500 909,608 1,023,991 mance of the Raped Work on the Rese Agriculture on the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agricultures in the Rese Agriculture of Inspection, Grant Inspection, Grant Inspection on the Research Res	Other Provincial Other Federal Other Agencies Total Desert Futures Desert Future Japan/ Alberta Desert Future Japan/ Alberta Desert Future Federal Desert Future Japan/ Alberta Desert	20 4 13 46 Award CTR CTR OPR OPR OPR	\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255 22,900	ALED ARCA ASWC AART ARCA
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grade Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Hawkins, M H Co-investigator with Len Impact of Lamb Imports Lerohl, M L Influence of Inspection, The Impact of Grain Pric Co-investigator with Bau Influence of Inspection, Manning, T W Co-investigator with Philerersen, T A	onomy Project eman, M M: Pe llips, W E: To E Change in Jag duate Student, The Potential for n of Tillage Man ohl, M L: Influe on the Alberta Grading and M ce Pooling on A uer, L: An Ecor Grading and M llips, W E: The	\$ \$ Title rform Exter Dane Mar Marke Albei nomi farke	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the ement Systems in of Inspection, Gra and Industry et Promotion on the rta Farmer Return c Evaluation of Te et Promotion on the duction Structure	Other Provincial Other Federal Other Agencies Total Desert Futures Desert Future Japan/ Alberta Desert Future Japan/ Alberta Desert Future Federal Desert Future Japan/ Alberta Desert	20 4 13 46 Award CTR CTR OPR OPR OPR	\$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255 22,900	ALED ALED ARCA ASWC AART ARCA
Equipment Operating Total Department of Rural Econvestigator Adamowicz, W L Co-investigator with Vee Co-investigator with Phil Apedaile, L P The Impact of Structural Agricultural Trade - Grade Alberta - Heilongjiang: T Student, Ron Gietz Bauer, L An Economic Evaluation Hawkins, M H Co-investigator with Len Impact of Lamb Imports Lerohl, M L Influence of Inspection, The Impact of Grain Price Co-investigator with Bau Influence of Inspection, Manning, T W Co-investigator with Philerersen, T A An Analysis of the Socio	onomy Project eman, M M: Pe llips, W E: To E Change in Jag duate Student, The Potential for n of Tillage Man ohl, M L: Influe on the Alberta Grading and M ce Pooling on A uer, L: An Ecor Grading and M llips, W E: The	\$ \$ Title rform Exter Dane Marke Marke Albei nomi farke	12,500 909,608 1,023,991 mance of the Rap and Work on the R ese Agriculture on i L Nakamura int Ventures in the ement Systems in of Inspection, Gra and Industry et Promotion on the tra Farmer Return c Evaluation of Te et Promotion on the duction Structure ancy of Alberta's A	Other Provincial Other Federal Other Agencies Total Descend Futures Descend Futures Descend Future Japan/ Alberta Descend Industry - Graduate Descend Frown Soil Zone Descend From Soil Zone Desc	20 4 13 46 Award CTR CTR OPR OPR OPR OPR	\$\$\$\$ \$	464,755 54,995 271,103 1,023,991 <i>Amount</i> 24,860 15,900 14,000 4,000 12,255 22,900 12,000	ALED ALED ARCA ASWC AART ARCA AWP

vestigator	Project	Title			Award		Amount	Agency
nillips, W E								
	ture of the Alberts	a and C	anadian Farm	Sector: A Frontier Cost	OPR	\$	12,075	AART
Function Analysis	Caro or the rubbile	. u.iu 0	a again ann	. 200.01.71.10.11.01.0001	9 1 11	Ψ	,0,0	, , , , , , ,
Sub-Basin Water Mar	nagement Plannir	na Stud	ly in Northwest	tern Alberta	CTR	\$	7,450	ΑE
	_	_		cators for Spacing in Lodgepole	CTR	\$	2,000	AGCA
				Economic Returns from	• • • • • • • • • • • • • • • • • • • •	*	2,000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Spacing of Lodgepole	and White Sprud	ce Rele	ased from Asp	pen Competition				
To Extend Work on th	ne Research Proje	ect on A	An Economic E	Evaluation of the Impact of	OPR	\$	4,000	LGL
Potential Expansion of	of the Agricultural	Land E	Base in Alberta	on Fish and Wildlife Resources				
Previously Funded by	/ Alberta Energy a	and Nat	tural Resource	es				
eman, M M	orobl Militafluo	noo of	Inopostion Cr	adina				
Co-investigator with L Export Markets for We					∩ BB	æ	10.000	ABCA
*				Tarket MIX	OPR	\$	10,000	ARCA
Macro-Economic Influ					OPR	\$	21,000	ARCA
Performance of the R	apeseed Futures	warke	τ		OPR	\$	18,000	ARCA
eman, T S Co-investigator with V	/eeman M.M·F∨	nort Ma	arkets for Wes	tern Canadian				
Co-investigator with V		•						
Productivity Growth a					OPR	\$	26,000	ARCA
i roductivity Growth a	ind Fromability III	uie Fie	anie Granis Se	0.01	ΟI-U	Ψ	۵,000	ALION
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	4	\$	50,210	Other Provincial	13	\$	217,263	
Operating	13	\$	189,053	Other Federal	1	\$	2,000	
Total	17	\$	239,263	Other Agencies	3	\$	20,000	
				Total	17	\$	239,263	
epartment of Soil So vestigator	cience Project	Title			Award		Amount	Agency
								
nanasyk, D S								-
nanasyk, D S A Study of Water Ero	sion in the Peace	River	Region		OPR	\$	48,900	ARCA
A Study of Water Eros Determine Changes in	n Soil Physical C	onditior	ns (Soil Tilth) E	Before and After Deep Ripping,	OPR CTR	\$ \$	48,900 17,576	ARCA TAUC
A Study of Water Eros Determine Changes in Peat and Manure Tre	n Soil Physical C	onditior	ns (Soil Tilth) E	Before and After Deep Ripping, lta Utilities Highvale Mine				
A Study of Water Ero Determine Changes in Peat and Manure Tre Idas, M J	n Soil Physical Catments on Recla	onditior aimed S	ns (Soil Tilth) E Soils at TransA		CTR	\$	17,576	TAUC
A Study of Water Ero Determine Changes i Peat and Manure Tre Idas, M J Physical-chemical Eff	n Soil Physical C atments on Recla fects of Nitrogen I	onditior aimed S Fertilize	ns (Soil Tilth) E Soils at TransA ers on Soils		CTR OPR	\$	17,576 10,853	TAUC
A Study of Water Ero Determine Changes i Peat and Manure Tre das, M J Physical-chemical Eff Physical-chemical Eff	n Soil Physical C atments on Recla fects of Nitrogen I fects of Nitrogen I	onditior aimed S Fertilize Fertilize	ns (Soil Tilth) E Soils at TransA ers on Soils ers on Soils	Ita Utilities Highvale Mine	OPR OPR	\$ \$ \$	17,576 10,853 24,670	TAUC AART ARCA
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A Study of Water Ero Determine Changes in Peat and Manure Tre Idas, M J Physical-chemical Eff Physical-chemical Eff (1) Dynamics of Heav Soil Minerals	n Soil Physical Cratments on Reclated fects of Nitrogen I fects of Nitrogen I was Metals in Soil S	onditior aimed S Fertilize Fertilize Systems	ns (Soil Tilth) E Soils at TransA ers on Soils ers on Soils s (2) Degradat	lta Utilities Highvale Mine	OPR OPR	\$ \$ \$	17,576 10,853 24,670	TAUC AART ARCA
A Study of Water Eros Determine Changes is Peat and Manure Tre udas, M J Physical-chemical Eff Physical-chemical Eff (1) Dynamics of Heav Soil Minerals Co-investigator with J	n Soil Physical Cratments on Recla fects of Nitrogen I fects of Nitrogen I ry Metals in Soil S Juma, N G: Devel	onditior aimed S Fertilize Fertilize Systems	ns (Soil Tilth) E Goils at TransA ers on Soils ers on Soils s (2) Degradat t of New Mana	lta Utilities Highvale Mine	OPR OPR OPR	\$ \$	17,576 10,853 24,670 19,417	TAUC AART ARCA NSERC
A Study of Water Eros Determine Changes is Peat and Manure Tre Idas, M J Physical-chemical Eff Physical-chemical Eff (1) Dynamics of Heav Soil Minerals Co-investigator with J Physical-chemical Eff	n Soil Physical Cratments on Recla fects of Nitrogen I fects of Nitrogen I ry Metals in Soil S Juma, N G: Devel	onditior aimed S Fertilize Fertilize Systems	ns (Soil Tilth) E Goils at TransA ers on Soils ers on Soils s (2) Degradat t of New Mana	lta Utilities Highvale Mine	OPR OPR	\$ \$ \$	17,576 10,853 24,670	TAUC AART ARCA
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A Study of Water Eros Determine Changes is Peat and Manure Tre Idas, M J Physical-chemical Eff Physical-chemical Eff (1) Dynamics of Heav Soil Minerals Co-investigator with J Physical-chemical Eff Phnson, B N Co-investigator with Mima, N G Co-investigator with F Mechanisms of Biolog	n Soil Physical Coatments on Reclated the American Fects of Nitrogen In Metals in Soil Strain, N. G.: Development of Nitrogen In McGill, W. B.: History of Nitrogen In Mineralization in Mineralization in McGill Mineraliz	onditional med S Fertilize Fertilize Systems opmen Fertilize ochemic utrient on and	ns (Soil Tilth) Edoils at TransAers on Soils ers on Soils (2) Degradat of New Manaers on Soils cal Aspects of Supply and Bullmobilization	ion and Authigenic Formation of agement Systems Tree Root-Soil udgets in of Nitrogen in Soils	OPR OPR OPR OPR	\$ \$	17,576 10,853 24,670 19,417 10,000	AART ARCA NSERC WCOF
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A Study of Water Eros Determine Changes is Peat and Manure Tre Idas, M J Physical-chemical Eff Physical-chemical Eff (1) Dynamics of Heav Soil Minerals Co-investigator with J Physical-chemical Eff hnson, B N Co-investigator with M Ma, N G Co-investigator with F Mechanisms of Biolog Development of New CGill, W B Histochemical Aspect Mechanisms Controll Phorg, M Effect of Soil Moisture A Study of Fall-applie Banding	n Soil Physical Cratments on Reclater the Nitrogen I fects of Nitrogen I fects of Nitrogen I support of the Nitrogen I fects of Tree Root-Sing Dynamics of the on Banding Nitrogen: Timir	onditional med Sertilized Fertilized Systems opmen Fertilized ochemical utrient on and stems to oil Interpolation ogen Fertilized og	ns (Soil Tilth) Edoils at TransAers on Soils ers on Soils ers on Soils (2) Degradate of New Manaers on Soils cal Aspects of Supply and Bullmobilization to Counteract eractions of Materials in Sectilizers oil Test for Nitroscials at Soil Test for Nitroscials at Test for	ion and Authigenic Formation of agement Systems Tree Root-Soil udgets in of Nitrogen in Soils Soil Degradation	OPR OPR OPR OPR OPR OPR OPR OPR	\$ \$	17,576 10,853 24,670 19,417 10,000 21,530 140,000 8,724 12,480 8,000 7,850	AART ARCA NSERC WCOF NSERC AFDRT NSERC AART AART
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A Study of Water Eros Determine Changes is Peat and Manure Tre Idas, M J Physical-chemical Eff Physical-chemical Eff (1) Dynamics of Heav Soil Minerals Co-investigator with J Physical-chemical Eff hnson, B N Co-investigator with M Ma, N G Co-investigator with F Mechanisms of Biolog Development of New EGIII, W B Histochemical Aspect Mechanisms Controll Phorg, M Effect of Soil Moisture A Study of Fall-applie Banding The Role of Nitrogen Improving the Efficier Systems A Study of Fall Applie Banding	n Soil Physical Cratments on Reclatments on Reclater Sof Nitrogen I fects of Tree Root-Sing Dynamics of the One of Soil Nitrogen: Timir in Reclamation oncy of Soil Nitrogen I fimired Nitrogen: Timir	onditional med S Fertilize Fertilize Systems opmen Fertilize ochemic utrient on and stems t oil Inter Organic ogen F ng of So f Sulfur en and	ns (Soil Tilth) Escoils at TransAcers on Soils ers on Soils ers on Soils (2) Degradate of New Managers on Soils cal Aspects of Supply and Bullmmobilization to Counteract eractions of Materials in Sertilizers oil Test for Nitro oil Test for N	alta Utilities Highvale Mine aion and Authigenic Formation of agement Systems Tree Root-Soil udgets in of Nitrogen in Soils Soil Degradation Soils ogen, Incorporation, and gen for Different Tillage-straw	OPR	\$ \$\$\$\$ \$ \$	17,576 10,853 24,670 19,417 10,000 21,530 140,000 8,724 12,480 8,000 7,850 7,300 65,486 7,900	AART ARCA NSERC WCOF NSERC AFDRT NSERC AART AART AERT AICA IOL
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Investigator	Project	Title		1. 1. d. 1. d. 1.	Award		Amount	Agency
Pawluk, S								
Co-investigator v	vith Dudas, M J: Physi	cal-c	hemical Effects	of Nitrogen				
Hydrological Influ	uences upon Soil Pedo	ogene	esis		OPR	\$	45,871	NSERC
Co-investigator v	Co-investigator with Juma, N G: Development of New Management Systems							
	Co-investigator with Dudas, M J: Physical-chemical Effects of Nitrogen							
Pluth, D J								
	vith La Roi, G H (Scier	nce, E	Botany): PRUF F	Program: Development of				
Lodgepole Robertson, J A								
, ,	of Previously Applied	P Fe	rtilizer on Tilled	and Untilled Soils	OPR	\$	12,000	AART
	idual Potassium from				OPR	\$	5.581	AART
•			•	re and Role of Organisms	OPR	\$	88.880	ARCA
	idual Potassium from I			_	OPR	\$	2,000	COM
•	of Previously Applied			• •	OPR	\$	8,000	IOL
	idual Potassium from I				OPR	\$	2.000	PCS
-	idual Potassium from			• •	OPR	\$	3,000	PPI
-	of Previously Applied		_	* *	OPR	\$	5,000	WCOF
Webster, G R						·	-,	
Reclamation of S	Solonetzic Soils				OPR	\$	23,260	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	1	\$	17,576	NSERC	6	\$	262,558	
Operating	26	\$	608,702	Other Provincial	11	\$	288,244	
Total	27	\$	626,278	Other Agencies	10	\$	75,476	
				Total	27	\$	626,278	

Faculty of Arts

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	4	\$ 19,400	NSERC	10	\$ 133,495
Contracts	8	\$ 182,029	SSHRC	23	\$ 346,850
Operating	35	\$ 512,254	Other Provincial	3	\$ 25,291
Total	47	\$ 713,683	Other Federal	6	\$ 66,223
		•	Other Agencies	5	\$ 141,824
			Total	47	\$ 713,683

Department of Anthropology

Investigator	Project	Title		Award	Amount	Agency	
Asch, M I							
Dene Mapping Pr	roject				CTR	\$ 130,496	DN
Beattie, O B	•						
Completion of the	Excavation and Fore	nsic	Analysis of Thre	ee Graves from the Last Franklin	OPR	\$ 17,396	SSHRC
Expedition, 1846,	Beechy Island, NWT						
Fedigan, L M							
Life Histories, De	mography, and Repro	ducti	ion in Polygamo	ous Primates	OPR	\$ 23,040	NSERC
Freeman, M M							
"Knowing the Nor	th: Integrating Tradition	on, T	echnology and S	Science", Nov 20-22, 1986,	CFC	\$ 6,000	SSHRC
Edmonton, Albert	a						
Lubell, D							
	eolithic Transition in S	outh	ern Portugal		OPR	\$ 8,480	SSHRC
Schweger, C E							
	0, 0	aphy	of Alaska-Yuko	n Tephras and Paleoecology of	OPR	\$ 9,600	NSERC
the Ice-free Corrid	dor, Alberta						
Type of Award	No.		Amount	Source of Funds	No.	Amount	
Conferences	1	\$	6,000	NSERC	2	\$ 32,640	
Contracts	1	\$	130,496	SSHRC	3	\$ 31,876	
Operating	4	\$	58,516	Other Agencies	1	\$ 130,496	
Total	6	\$	195,012	Total	6	\$ 195,012	

Department of Classics								
nvestigator	Project	Title			Award		Amount	Agency
Garbrah, K A A Grammar of the Ionic Ins	scriptions fro	m Ch	iios		OPR	\$	7,211	SSHRC
Rossiter, J Temporary Assistant for Updating of Collections Records W.G. Hardy Collection of Near Eastern and Classical Antiquities							2,640	AMUSA
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	2	\$	9,851	SSHRC	1	\$	7,211	
				Other Agencies Total	1 2	\$ \$	2,640 9,851	
Department of Comparati	ve Litera	ture						
nvestigator	Project	Title			Award		Amount	Agency
Arnold, S H Comparative Perspectives Blodgett, E D	on the Wor	ks of I	Mongo Beti		OPR	\$	8,760	SSHRC
Towards a History of the C University of Alberta, Oct 1	anadian Lite 6-18, 1986	erary I	Institution: Prob	lems of Literary Reception,	CFC	\$	5,500	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	5,500	SSHRC	2	\$	14,260	
Operating Total	1 2	\$ \$	8,760 14,260					
Department of Economics	S Project	Title			Award		Amount	Agency
Boothe, P M Financial Market - Macro L	<u> </u>		la		OPR	\$	10,846	SSHRC
.andon, S K Sectoral Shocks and Uner	onlovment ir	. Can	ada		OPR	\$	7,410	SSHRC
.ivernois, J Co-investigator with Scarfe				n and	OFN	Φ	7,410	SSHILL
Percy, M B PRUF - A General Equilibri Columbia: Application to In	ium Model o Itensive For	of the est Ma	Forest Industry anagement and	and Economy of British International Trade Issues	CTR	\$	9,970	CFS
Ryan, D L Co-investigator with Scarfe	e, B L: Deter	minar	nts of Exploratio	n and				
Scarfe, B L Determinants of Exploratio	n and Deve	lopme	ent Activity Leve	ls	OPR	\$	10,000	EMRC
Szostak, R W The Role of Transportation England and France	in the Indu	strial F	Revolution: A Co	omparison of Eighteenth Century	OPR	\$	4,470	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	1	\$	9,970	SSHRC	3	\$	22,726	
Operating Total	4 5	\$ \$	32,726 42,696	Other Federal Total	2 5	\$ \$	19,970 42,696	
Department of English								
nvestigator	Project	Title			Award		Amount	Agency
Clements, P D The Twentieth Century Sec Companion to Literature in Drrell, J O	ction of a Bo English	ook Ti	tled, The Woma	n Writing: A Feminist	OPR	\$	25,140	SSHRC
The Interior Design of Shal	kespeare's	Globe	and Inigo Jone	's Cockpit Theatres	OPR	\$	3,510	SSHRC
Whitaker, M A The Arthurian Legends in (OPR	\$	3,010	SSHRC
Operating				SSHRC	3	\$	31,660	

Department of History							
vestigator	Project_Title			Award		Amount	Agency
Ethno-religious People			7-1987: A North American	CFC	\$	4,400	SSC
angdon, J L Medieval English Mills	During the Reign of E	dward II		OPR	\$	2,850	SSHRC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	4,400	SSHRC	1	\$	2,850	
Operating Total	1 \$ 2 \$	2,850 7,250	Other Federal Total	1 2	\$ \$	4,400 7,250	
epartment of Philoso	phy						
vestigator	Project Title			Award		Amount	Agency_
Alberta	losophical Association	n Annual Confer	rence, Oct 3-5, 1986, Edmonton,	CFC	\$	3,500	SSHRC
Illon, B S The Epistemology and	Logic of Dharmakirti			OPR	\$	24,304	SSHRC
acKenzie, Č	_	Canadian Philes	anhinal				
Co-investigator with Co atthen, M Forms and Categories Co-investigator with Co harp, W D	: A Study of the Greek	Theory of Beir	ng	OPR	\$	8,950	SSHRC
Co-investigator with Co	•						
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences Operating Total	1 \$ 2 \$ 3 \$	3,500 33,254 36,754	SSHRC	3	\$	36,754	
Department of Politica	I Science Project Title			Award		Amount	Agency
eating, T	7.0,000, 7.00						
Co-investigator with Pr	att, L R: We Stand on	Guard for Who	om? Strategy				
ratt, L R We Stand on Guard fo	r Whom? Strategy and	d Canadian Sed	curity Interests	OPR	\$	7,000	CIIPS
Deregulation and North				OPR	\$	11,323	SSHRC
tevenson, G Canadian Federalism i	in the Age of John A.	Macdonald		OPR	\$	7,325	SSHRC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	3 \$	25,648	SSHRC	2	\$	18,648	
			Other Federal Total	1 3	\$ \$	7,000 25,648	
Department of Psycho	o logy see also Facul	lty of Science					
nvestigator	Project Title	···_		Award		Amount	Agency
eck, C H M Chronic Benzodiazepi	ne Effects on Rat Soc	ial Behaviour		OPR	\$	17,416	AMHAC
isanz, G L Children's Use of Story	v Schemata: Second (Generation Res	search	OPR	\$	14,423	NSERC
Bisanz, J Developmental Chang				OPR	\$	13,000	NSERC
Spatial Cognition and Pixon, P	Wayfinding by Childre	en		OPR	\$	12,822	NSERC
Basic and Complex Pr	rocesses in Reading			OPR	\$	14,423	NSERC

/estiga	tor	Project	Title			Award		Amount	Agency
		i roject	11116	 -		Awaiu		AIIIVUIII	Agency
iedmar				D			_	,	NG == -
M tai, J ۷		ebral Specia	lızatic	on, Divided Atter	ntion and Mental Rotation	OPR	\$	16,027	NSERC
		ntial Assessr	nent d	of Perceptual-M	otor Function (Transfer from	OPR	\$	10,000	NSERC
Concordia University, Montreal)							•	,	
chelt,		-1'l- O - 1'-1-		. I. D II		OPR	•	40.400	NOEDO
Perceptual Analysis of Tactile Spatiotemporal Patterns le, B G							\$	12,480	NSERC
	o-investigator with Dobb	s, A R (Scier	nce): I	Minor Head Inju	ry and Accident				
	o-investigator with Dobb	•			-				
Th	he Development of a Scl	hema and Te	xt Pro	ocessing		OPR	\$	7,680	NSERC
Sc	cripts for Aggression					OPR	\$	39,494	SSHRC
Ty	ype of Award	No.		Amount	Source of Funds	No.		Amount	
_	perating	10	\$	157,765	NSERC	8	\$	100,855	
-,	. •		•	,	SSHRC	1	\$	39,494	
					Other Provincial	1	\$	17,416	
					Total	10	\$	157,765	
epart	ment of Sociology	•							
estiga	tor	Project	Title		_	Award		Amount	Agency
ckler,				-					
	ariability in Juvenile Just	ice				OPR	\$	5,000	SSHRC
rtnage A		outh Employi	nent.	Underemploym	ent and Unemployment in Three	OPR	\$	77,638	SSHRC
Ca	anadian Cities			от. сот. ст. р. сут	on and onemproyment in the		*	,000	555
nnedy						075			.=
	987 All Alberta Study					CTR	\$	5,250	AECC
	987 All Alberta Study					CTR	\$	2,187	AFL
	987 All Alberta Study					CTR	\$	2,625	AGT
	987 All Alberta Study	_l				CTR	\$	1,750	APA
۱۶ nt, S <i>A</i>	987 Edmonton Area Stud A	ау				CTR	\$	4,750	EBH
	ects and Cults in Canada	a, 1970-1980): A R	esource Mobiliz	ation Perspective	OPR	\$	48,733	SSHRC
otki, K				611.3	0.1.11	055			001155
	ollaborative Study with F				ern Ont and Mme Fertility Study - \$157,929	OPR			SSHRC
rthcot		of Montreal	. Can	adian Nalional	refully Study - \$157,929				
	o-investigator with Foste	r, J E (Histor	γ): C	onference on the	e Mormon Presence				
lamon	n, E D	•	• /			.			
Sexual Offences Against Male Children & Youths in Edmonton, 1980-85						OPR	\$	9,853	SGC
	exual Offences Against	Children and	Yout	hs in Edmonton	1980-1985	OPR	\$	10,000	SSHRC
Se	ilverman, R A						\$	25,000	SGC
Se verma	niversity of Alberta's Cel	University of Alberta's Centre of Criminological Research						,	
Se verma Ui	•								
Se verma Ur	ype of Award	No.		Amount	Source of Funds	No.		Amount	
Selverma Ur Ty	ype of Award ontracts	6	\$	41,562	SSHRC	4	\$	141,371	
Se verma Ui Ty Co	ype of Award ontracts perating	6 5	\$	41,562 151,224	SSHRC Other Provincial	4 2	\$	141,371 7,875	
Selverma Ur Ty Co	ype of Award ontracts	6		41,562	SSHRC	4		141,371	

Faculty of Business

Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	6 \$	120,903	NSERC	1	\$	10,714	
Total	6 \$	120,903	SSHRC	3	\$	27,934	
			Other Provincial Other Federal	1	\$ \$	63,400 18,855	
			Total	6	\$	120,903	
partment of Finance and	d Managem	ent Science					
estigator	Project Title			Award		Amount	Agency
haible, S Generalized Convexity in O	ptimization and	Economics		OPR	\$	10,714	NSERC
Operating			NSERC	1	\$	10,714	
epartment of Marketing a	and Econon	nic Analysis					
restigator	Project Title			Award		Amount	Agency
uviere, J J Comparison of experimenta Dr. J. Horowitz at the Unive			models - Principal investigator is	OPR			NSF
	ODD			USFS			
Donald A. Anderson Univer			vior, Principal Investigator is Dr. . Louviere is co-investigator	OPR			0010
Donald A. Anderson Univer	sity of Wyoming	g - \$16,940.00 Dr	. Louviere is co-investigator	OPR	\$	9,006	
Donald A. Anderson Univer worth, P	sity of Wyoming	g - \$16,940.00 Dr	. Louviere is co-investigator		\$ \$	9,006 9,006	
Donald A. Anderson Univer worth, P The Process of Economic II Operating	sity of Wyoming	g - \$16,940.00 Dr e EEC and It's Sig	. Louviere is co-investigator gnificance for Canada	OPR		,	
Donald A. Anderson Univerworth, P The Process of Economic In Operating epartment of Organization	sity of Wyoming	g - \$16,940.00 Dr e EEC and It's Sig is	. Louviere is co-investigator gnificance for Canada	OPR		,	SSHRC
Donald A. Anderson Univerworth, P The Process of Economic II Operating Epartment of Organization estigator Ilen, D Co-investigator with Hall, A Sport Studies): The Status	ntegration in the onal Analys Project Title (Physical Educ	g - \$16,940.00 Dr e EEC and It's Sig is eation and Recrea	. Louviere is co-investigator gnificance for Canada	OPR		9,006	SSHRO
Donald A. Anderson Univerworth, P The Process of Economic II Operating Epartment of Organization estigator Ilen, D Co-investigator with Hall, A Sport Studies): The Status Id, R H Effects of Leader Training a	onal Analys Project Title (Physical Educ of Women in N	g - \$16,940.00 Dr e EEC and It's Sig is eation and Recrea	. Louviere is co-investigator gnificance for Canada SSHRC ation, Physical Education and	OPR		9,006	SSHRC Agency
Donald A. Anderson Univerworth, P The Process of Economic In Operating Epartment of Organization estigator Ilen, D Co-investigator with Hall, A Sport Studies): The Status Idd, R H Effects of Leader Training a phart, R P Organizational Design, Wor	onal Analys Project Title (Physical Educ of Women in No	is eation and Recreasos on Decision Mak	. Louviere is co-investigator gnificance for Canada SSHRC ation, Physical Education and ing Effectiveness	OPR 1 Award	\$	9,006 Amount	SSHRC Agency
Donald A. Anderson Univerworth, P The Process of Economic In Operating Ppartment of Organization estigator Ilen, D Co-investigator with Hall, A Sport Studies): The Status Id, R H Effects of Leader Training a phart, R P Organizational Design, Worlings, C R Planning, Organization and	onal Analys Project Title (Physical Educ of Women in No	is eation and Recrea SOs on Decision Mak	. Louviere is co-investigator gnificance for Canada SSHRC ation, Physical Education and ing Effectiveness ccidents	OPR 1 Award OPR	\$	9,006 <i>Amount</i> 2,988	SSHRC Agency SSHRC
Donald A. Anderson Univerworth, P The Process of Economic In Operating Epartment of Organization Restigator Illen, D Co-investigator with Hall, A Sport Studies): The Status of the	onal Analys Project Title (Physical Educ of Women in Nand Group Size rker Safety and	is exation and Recreasos on Decision Make Petrochemical A	scidents ance Delivery Systems	OPR 1 Award OPR OPR	\$ \$	9,006 Amount 2,988 63,400	Agency SSHRO ACOH
Donald A. Anderson Univerworth, P The Process of Economic In Operating Epartment of Organization Electricator Illen, D Co-investigator with Hall, A Sport Studies): The Status of th	onal Analys Project Title (Physical Educ of Women in Na and Group Size rker Safety and Implementation of the Canadia	is eation and Recrea Sos on Decision Mak Petrochemical A in High Perform	SSHRC ation, Physical Education and ing Effectiveness ance Delivery Systems	OPR 1 Award OPR OPR OPR	\$ \$ \$ \$	9,006 Amount 2,988 63,400 18,855	Agency SSHRC ACOH FAS
Donald A. Anderson Univerworth, P The Process of Economic In Operating Epartment of Organization Estigator Hen, D Co-investigator with Hall, A Sport Studies): The Status of Hall, A Sport Studies of Leader Training a phart, R P Organizational Design, Worldings, C R Planning, Organization and vidan, M Strategic Change - A Study erray, A I	onal Analys Project Title (Physical Educ of Women in Na and Group Size rker Safety and Implementation of the Canadia	is eation and Recrea Sos on Decision Mak Petrochemical A in High Perform	SSHRC ation, Physical Education and ing Effectiveness ance Delivery Systems	OPR 1 Award OPR OPR OPR	\$ \$ \$ \$	9,006 Amount 2,988 63,400 18,855	Agency SSHRC ACOH FAS
Donald A. Anderson Univerworth, P The Process of Economic In Operating Epartment of Organization Estigator Hen, D Co-investigator with Hall, A Sport Studies): The Status of Hall, A Sport Studies of Leader Training a phart, R P Organizational Design, Worldings, C R Planning, Organization and vidan, M Strategic Change - A Study irray, A I Co-investigator with Javida	onal Analys Project Title (Physical Educ of Women in Nand Group Size rker Safety and Implementation of the Canadia n, M: Strategic	is exation and Recreasos on Decision Mak Petrochemical A in in High Perform an Banking Indust Change - A Study	SSHRC Source of Funds Source of Funds Schriction and strong and	OPR Award OPR OPR OPR OPR OPR 2	\$ \$ \$ \$ \$	9,006 Amount 2,988 63,400 18,855 15,940 Amount 18,928	Agency SSHRC ACOH FAS
Donald A. Anderson Univerworth, P The Process of Economic In Operating Epartment of Organization Eestigator Ilen, D Co-investigator with Hall, A Sport Studies): The Status of Indian India	onal Analys Project Title (Physical Educ of Women in No and Group Size rker Safety and Implementation of the Canadia n, M: Strategic No.	is exaction and Recreasos on Decision Make Petrochemical An in High Performant Banking Indust Change - A Study	Source of Funds	OPR Award OPR OPR OPR OPR OPR	\$ \$ \$ \$	9,006 Amount 2,988 63,400 18,855 15,940 Amount	Agency SSHRC ACOH FAS

Faculty of Dentistry

Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	10,000	AHFMR	2	\$	27,616	
Operating	8 \$	315,323	MRC	6	\$	261,707	
Total	9 \$	325,323	Other Agencies Total	1 9	\$ \$	36,000 325,323	
culty of Dentistry							
estigator	Project Title	·		Award		Amount	Agency
rgreaves, J A			earch in the Faculty of Dentistry	OPR	\$	15,000	MRC
Elderly, to be held in Ba			tment of Dental Disease of the	CFC	\$	10,000	AHFMF
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	10,000	AHFMR	1	\$	10,000	
Operating	1 \$	15,000	MRC	1	\$	15,000	
Total	2 \$	25,000	Total	2	\$	25,000	
epartment of Oral Biol	logy						
estigator	Project Title	•		Award		Amount	Agency
ott, P G							
Proteoglycans of Non-C	•			OPR	\$	59,652	MRC
Maintenance Grant - Am	•	-		OPR	\$	26,367	MRC
Collagen-degrading Pro	teinases from Cells	s of Human Gingi	va	OPR	\$	61,905	MRC
Operating			MRC	3	\$	147,924	
epartment of Restorat	t ive Dentistry Project Title			Award		Amount	Agency
	riojeci rille	,		Awaiu	-	Amount	Agency
							
derich, D N	idodontic Therapy			OPR	\$	17,616	AHFMF
derich, D N Laser Applications in En Iland, G R	. •	ne.					
derich, D N Laser Applications in En Illand, G R Oral Nerves and Their F	Response to Dama		Course of Funds	OPR	\$ \$	54,359	AHFMF MRC
derich, D N Laser Applications in En Iland, G R Oral Nerves and Their F	Response to Dama	Amount	Source of Funds		\$	54,359 <i>Amount</i>	AHFMF MRC
derich, D N Laser Applications in En Illand, G R Oral Nerves and Their F	Response to Dama		AHFMR	OPR No.	\$	54,359 <i>Amount</i> 17,616	
derich, D N Laser Applications in En Iland, G R Oral Nerves and Their F Type of Award	Response to Dama	Amount		OPR	\$	54,359 <i>Amount</i>	
derich, D N Laser Applications in En Illand, G R Oral Nerves and Their F Type of Award Operating	Response to Dama No. 2 \$	Amount	AHFMR MRC	OPR <i>No.</i> 1 1	\$ \$ \$	54,359 Amount 17,616 54,359	
derich, D N Laser Applications in En Illand, G R Oral Nerves and Their F Type of Award Operating epartment of Stomato	Response to Dama No. 2 \$	Amount 71,975	AHFMR MRC	OPR <i>No.</i> 1 1 2	\$ \$ \$	54,359 Amount 17,616 54,359 71,975	MRC
derich, D N Laser Applications in En Illand, G R Oral Nerves and Their F Type of Award Operating epartment of Stomato	Response to Dama No. 2 \$	Amount 71,975	AHFMR MRC	OPR <i>No.</i> 1 1	\$ \$ \$	54,359 Amount 17,616 54,359	MRC
Oral Nerves and Their F Type of Award Operating epartment of Stomato vestigator gert, F M	Response to Dama No. 2 \$ logy Project Title	Amount 71,975	AHFMR MRC Total	OPR <i>No.</i> 1 1 2	\$ \$ \$	54,359 Amount 17,616 54,359 71,975	
derich, D N Laser Applications in En Iland, G R Oral Nerves and Their F Type of Award Operating epartment of Stomato restigator	Response to Dama No. 2 \$ logy Project Title ott, P G (Oral Biological Biology)	Amount 71,975 gy): Maintenance	AHFMR MRC Total Grant - Amino Acid	OPR <i>No.</i> 1 1 2	\$ \$ \$	54,359 Amount 17,616 54,359 71,975	MRC
Laser Applications in Enumber of Stomato restigator gert, F M Co-investigator with Scotorious Co-investigator with School Co-investigator w	Response to Dama No. 2 \$ logy Project Title ott, P G (Oral Biology Antibodies with	Amount 71,975 gy): Maintenance Peridontal Patho	AHFMR MRC Total Grant - Amino Acid	OPR No. 1 1 2 Award	\$ \$ \$ \$ \$	54,359 Amount 17,616 54,359 71,975 Amount	MRC Agency
Laser Applications in Encland, G R Oral Nerves and Their F Type of Award Operating Pepartment of Stomato Vestigator Igert, F M Co-investigator with Scotting Co-investigator with Scheller, P	Response to Dama No. 2 \$ logy Project Title ott, P G (Oral Biology Antibodies with nuller, P: Comparis	Amount 71,975 gy): Maintenance Peridontal Patholon of Efficacy and	AHFMR MRC Total Grant - Amino Acid	OPR No. 1 1 2 Award	\$ \$ \$ \$ \$	54,359 Amount 17,616 54,359 71,975 Amount	MRC Agency MRC
Laser Applications in Enumber of R Oral Nerves and Their F Type of Award Operating Pepartment of Stomato Destigator Des	Response to Dama No. 2 \$ logy Project Title ott, P G (Oral Biology Antibodies with nuller, P: Comparis	Amount 71,975 gy): Maintenance Peridontal Patholon of Efficacy and	AHFMR MRC Total Grant - Amino Acid gens d Safety	OPR No. 1 1 2 Award OPR	\$ \$ \$	54,359 Amount 17,616 54,359 71,975 Amount	MRC Agency
Laser Applications in Encolland, G R Oral Nerves and Their F Type of Award Operating Pepartment of Stomato Vestigator Ugert, F M Co-investigator with Scottonion of Secretor Co-investigator with Schehuller, P Comparison of Efficacy Disease Type of Award	Response to Dama No. 2 \$ logy Project Title ott, P G (Oral Biology ry Antibodies with nuller, P: Comparis and Safety of Spira	Amount 71,975 gy): Maintenance Peridontal Patho on of Efficacy and amycin and Place	AHFMR MRC Total Grant - Amino Acid gens d Safety bo in the Treatment of Peridontal	OPR No. 1 1 2 Award OPR OPR	\$ \$ \$	54,359 Amount 17,616 54,359 71,975 Amount 44,424 36,000	MRC Agency
Laser Applications in Encoderich, D N Laser Applications in Encoderich, G R Oral Nerves and Their F Type of Award Operating Pepartment of Stomato Vestigator Igert, F M Co-investigator with Scottonine Reaction of Secretor Co-investigator with Scheller, P Comparison of Efficacy Disease	Response to Dama No. 2 \$ logy Project Title out, P G (Oral Biology and Safety of Spira No.	Amount 71,975 gy): Maintenance Peridontal Patholon of Efficacy and amycin and Place Amount	AHFMR MRC Total Grant - Amino Acid gens d Safety bo in the Treatment of Peridontal Source of Funds	OPR No. 1 1 2 Award OPR OPR No.	\$ \$ \$ \$	54,359 Amount 17,616 54,359 71,975 Amount 44,424 36,000 Amount	MRC Agency

Faculty of Education

Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	1	\$	47,138	NSERC	1	\$	6,946	
Operating	6	\$	50,514	SSHRC	4	\$	40,068	
Total	7	\$	97,652	Other Provincial	2	\$	50,638	
			·	Total	7	\$	97,652	
epartment of Educations	al Admini	strat	tion					
restigator	Project	Title			Award		Amount	Agency
nrad, A G Authority of Governing Boa	ards in Cana	dian H	ligher Education	1	OPR	\$	14,127	SSHRC
Operating				SSHRC	1	\$	14,127	
						•	, , , , , ,	
epartment of Education			S					
estigator	Project	Title			Award		Amount	Agency
rd, B Y Co-investigator with Foster	.lF(∆rte ⊨	liston/	ı): Conference o	on the Mormon Presence				
ch, N	, J L (A115, F	посогу	7. Comerence (on the Monnon Fresence				
•	, J E (Arts, H	History): Conference o	on the Mormon Presence				
portmont of Education	al Davaha	does.	•					
	ai FSVCNO							
	-							
estigator	Project			<u></u>	Award		Amount	Agency
vestigator dda, M	Project	Title						
estigator dda, M Communication Skills in De	Project	Title			Award OPR	\$	<i>Amount</i> 6,946	Agency NSERC
vestigator odda, M Communication Skills in De watzky, D D	Project Teaf Children	Title and A	dults	ng Family on Children in Canada		\$		Agency NSERC SSHRC
vestigator vida, M Communication Skills in De watzky, D D Family Form and Family Po Type of Award	Project Teaf Children	and A	dults	ng Family on Children in Canada Source of Funds	OPR		6,946	NSERC
dda, M Communication Skills in Dewatzky, D D Family Form and Family P	Project Teaf Children rocess: The	Title and A	dults	Source of Funds NSERC	OPR OPR	\$	6,946 3,000	NSERC
restigator dda, M Communication Skills in Dewatzky, D D Family Form and Family Ports Type of Award	Project Teaf Children rocess: The No.	and A	dults of the Changing	Source of Funds NSERC SSHRC	OPR OPR No. 1	\$ \$ \$	6,946 3,000 <i>Amount</i> 6,946 3,000	NSERC
restigator dda, M Communication Skills in Dewatzky, D D Family Form and Family Ports Type of Award	Project Teaf Children rocess: The No.	and A	dults of the Changing	Source of Funds NSERC	OPR OPR <i>No.</i>	\$	6,946 3,000 <i>Amount</i> 6,946	NSERC
restigator dda, M Communication Skills in Dewatzky, D D Family Form and Family Port Type of Award Operating	Project Teaf Children rocess: The No.	and A	dults of the Changing	Source of Funds NSERC SSHRC	OPR OPR No. 1	\$ \$ \$	6,946 3,000 <i>Amount</i> 6,946 3,000	NSERC
vestigator odda, M Communication Skills in Dewatzky, D D Family Form and Family Port Type of Award Operating ducational Research Selection	Project Teaf Children rocess: The No.	and A	dults of the Changing	Source of Funds NSERC SSHRC	OPR OPR No. 1	\$ \$ \$	6,946 3,000 <i>Amount</i> 6,946 3,000	NSERC
restigator Idda, M Communication Skills in Dewatzky, D D Family Form and Family Properties Type of Award Operating Iducational Research Servestigator Inka, S	Project Teaf Children rocess: The No. 2	Title and A Impac \$	dults of the Changing Amount 9,946	Source of Funds NSERC SSHRC	OPR OPR No. 1 1 2	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946	NSERC
vestigator odda, M Communication Skills in De iwatzky, D D Family Form and Family Pr Type of Award Operating ducational Research Selections vestigator unka, S Innovative Project: Survey	Project Teaf Children rocess: The No. 2	Title and A Impac \$	dults of the Changing Amount 9,946	Source of Funds NSERC SSHRC Total	OPR OPR No. 1 1 2	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946	NSERC SSHRC
restigator rodda, M Communication Skills in Dewatzky, D D Family Form and Family Properting Type of Award Operating ducational Research Servestigator Inka, S Innovative Project: Survey Institutions Operating	Project Teaf Children rocess: The No. 2 rvices Project To Digital Equation 1. 1	and A Impac \$ Title	dults of the Changing Amount 9,946	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary	OPR OPR No. 1 1 2 Award OPR	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500	NSERC SSHRC
dda, M Communication Skills in Dewatzky, D D Family Form and Family Portaing Type of Award Operating ducational Research Selectigator nka, S Innovative Project: Survey Institutions Operating	Project Teaf Children rocess: The No. 2 Project To Digital Equation of Digital Equation (Control of Di	and A Impac \$ Title juipme	dults of the Changing Amount 9,946	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary	OPR No. 1 1 2 Award OPR	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500	NSERC SSHRC Agency AAEM
restigator odda, M Communication Skills in Dewatzky, D D Family Form and Family Properting Type of Award Operating ducational Research Selectigator Inka, S Innovative Project: Survey Institutions Operating epartment of Elementary restigator	Project Teaf Children rocess: The No. 2 rvices Project To Digital Equation 1. 1	and A Impac \$ Title juipme	dults of the Changing Amount 9,946	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary	OPR OPR No. 1 1 2 Award OPR	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500	NSERC SSHRC Agency
dda, M Communication Skills in Dewatzky, D D Family Form and Family Properting Type of Award Operating ducational Research Selectigator Inka, S Innovative Project: Survey Institutions Operating epartment of Elementary Inestigator	Project Teaf Children rocess: The No. 2 Project To Digital Equation of Digital Equation Project To Digital Equation Project Di	and A Impac \$ Title uipme	dults of the Changin Amount 9,946 ent VAX Compu	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary Other Provincial	OPR No. 1 1 2 Award OPR 1	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500 Amount	Agency Agency
dda, M Communication Skills in Dewatzky, D D Family Form and Family Portaing Type of Award Operating ducational Research Selectigator nka, S Innovative Project: Survey Institutions Operating epartment of Elementary eestigator amberlin, C Sources of Elementary Teagan, W T	Project Teaf Children rocess: The No. 2 Project To Digital Equation of Digital Equation Project Teachers' Persistence of Persistence Project Teachers' Persistence Project Teacher Project Te	Title and A Impac \$ Title uipme	dults of the Changin Amount 9,946 ent VAX Compu	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary Other Provincial	OPR No. 1 1 2 Award OPR 1 Award CTR	\$ \$ \$ \$ \$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500 Amount 47,138	Agency Agency AED
dda, M Communication Skills in Dewatzky, D D Family Form and Family Portage of Award Operating ducational Research Selectigator nka, S Innovative Project: Survey Institutions Operating epartment of Elementary eestigator amberlin, C Sources of Elementary Tea	Project Teaf Children rocess: The No. 2 Project To Digital Equation of Digital Equation Project Teachers' Persistence of Persistence Project Teachers' Persistence Project Teacher Project Te	Title and A Impac \$ Title uipme	dults of the Changin Amount 9,946 ent VAX Compu	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary Other Provincial	OPR No. 1 1 2 Award OPR 1	\$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500 Amount	Agency Agency AED
dda, M Communication Skills in Dewatzky, D D Family Form and Family Portaing Type of Award Operating ducational Research Selectigator nka, S Innovative Project: Survey Institutions Operating epartment of Elementary eestigator amberlin, C Sources of Elementary Teagan, W T	Project Teaf Children rocess: The No. 2 Project To Digital Equation of Digital Equation Project Teachers' Persistence of Persistence Project Teachers' Persistence Project Teacher Project Te	Title and A Impac \$ Title uipme	dults of the Changin Amount 9,946 ent VAX Compu	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary Other Provincial	OPR No. 1 1 2 Award OPR 1 Award CTR	\$ \$ \$ \$ \$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500 Amount 47,138	Agency Agency AED
communication Skills in Dewatzky, D D Family Form and Family Properting Type of Award Operating Communication Skills in Dewatzky, D D Family Form and Family Properting Communication Skills in Dewatzky, D D Communication Skill	Project Teaf Children rocess: The No. 2 Project To Digital Equation Project Teachers' Persponental Factors No. 1	and A Impac \$ Title uipme Title pective tors	ent VAX Compu	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary Other Provincial Source of Funds SSHRC	OPR No. 1 2 Award OPR 1 Award CTR OPR No. 1	\$ \$ \$ \$ \$ \$ \$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500 Amount 47,138 19,841 Amount 19,841	Agency Agency AED
Type of Award Operating ducational Research Selevestigator Unka, S Innovative Project: Survey Institutions Operating epartment of Elementary Vestigator namberlin, C Sources of Elementary Tealing gan, W T Adult Illiteracy and Develop Type of Award	Project Teaf Children rocess: The No. 2 Project To Digital Equation Project Teachers' Persponental Factors No.	and A Impac \$ Title uipme Title pective tors	ent VAX Compu	Source of Funds NSERC SSHRC Total ter Systems at Post-Secondary Other Provincial	OPR No. 1 2 Award OPR 1 Award CTR OPR No.	\$ \$ \$ \$ \$ \$ \$	6,946 3,000 Amount 6,946 3,000 9,946 Amount 3,500 Amount 47,138 19,841 Amount	NSERC SSHRC Agency AAEM

Department of Industrial and Vo	cational Education
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Investigator	Project Title		Award	Amount	Agency	
Deane, A K Education and W	ork in a Changing Society		OPR	\$ 3,100	SSHRC	
Operating		SSHRC	1	\$ 3,100		

Department of Secondary Education

Investigator	Project Title	Award	Amount	Agency
Kass, H Collaborative Stu	udy with Connelly (Univ. of Toronto): Second Internation	nal Science Study - OPR		SSHRC

Faculty of Engineering

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	1	\$ 5,000	NSERC	139	\$ 4,148,592
Contracts	36	\$ 1,993,604	Other Provincial	31	\$ 1,333,045
Equipment	6	\$ 300,462	Other Federal	14	\$ 826,395
Infrastructure	7	\$ 229,520	Other Agencies	12	\$ 301,140
Operating	143	\$ 3,936,406	Total	196	\$ 6,609,172
Technology Transfer	3	\$ 144,180			
Total	196	\$ 6,609,172			

Faculty of Engineering

Operating

Invest	tigator Project Title	Award Amou	nt Agency
Dean	In Support of the Canadian Center for Arctic and Of	ffshore Engineering Research OPR \$ 3,00	00 BVI

Other Agencies

3,000

Department of Chemical Engineering

Investig	ator Project Title	Award	Amount	Agency
Chuan	g, K T		==	
	Research Involving a New Process for Controlling NOx Emissions	CTR	\$ 43,700	AECL
Dalla L	ana, I G			
	Hydroprocessing of Coal-Derived Liquids	OPR	\$ 52,400	AENR
	Catalytic Hydrolysis of Carbon Disulfide	OPR	\$ 15,000	CGPA
	Co-investigator with Wanke, S E: Investigations of Catalytic Gas-Phase			
	(1) Reactions, Rates, and Equilibrium in Acidgas Processing (2) Applications of IR Spectroscopy in Catalysis Research (3) Hydrodesulphurization of Model Compounds	OPR	\$ 31,430	NSERC
	Co-investigator with Wanke, S E: Optimal Chemical Routes for Heavy			
Fisher,	DG			
	Computer Control of Multivariable Processes	OPR	\$ 39,590	NSERC
	Applications of Artificial Intelligence in the Process Industries	OPR	\$ 30,000	NSERC
	Adaptive Process Control	OPR	\$ 51,030	NSERC

nvestigator	Project Tit	rle			Award		Amount	Agency
aray, M R								
Coal Research Grant Prog	ram - Functior	al Group A	Analysis o	of Coal Liquids	OPR	\$	46,000	AENR
Structural Characterization	of Heavy Oil	and Bitume	n Upgra	ding Reactions	CTR	\$	66,700	AOSTR
Co-investigator with Wanke	•			-				
Co-investigator with Westla		-	-					
Fermentation	, (,						
Co-investigator with Hrude	y, S E (Civil E	ngineering)	: Role of	Support Media in				
Enhancing								
Kinetics of Pyrolysis in Sup					OPR	\$	15,590	NSERC
Co-investigator with Wanke	∍, S E: Optima	I Chemical	Routes	for Heavy				
layes, R E					000	Φ.	44044	NOEDO
Dispersion Effects in Porou ynch, D T	is Media				OPR	\$	14,911	NSERC
Co-investigator with Wanke	S F: Investion	nations of (Catalytic	Gas-Phase				
Dynamic Behavior of Chen	-	-	-	Cao i naco i i	OPR	\$	23,904	NSERC
lasliyah, J H	noar and Cata	iy ilo i lodok	0.0		0	Ψ	20,001	1102110
Co-investigator with Nanda	ıkumar, K: Enf	nancement	of Gravi	ty Separation				
Fluid-Particles Dynamics					OPR	\$	35,000	NSERC
lather, A E								
Thermodynamic Properties					OPR	\$	22,176	NSERC
Co-investigator with Otto, F	D: Selective	Gas Treati	ng					
lorris, A J	nician and Co	merci of De	Cu	atoma	OPR	\$	17 600	NEEDC
Real Time Computer Supe			_		OPh	Ф	17,600	NSERC
Co-investigator with Fisher	-							
Co-investigator with Fisher andakumar, K	, D G: Applica	tions of An	iiticiai inti	eiligence				
Enhancement of Gravity Se	enaration of T	vo-Species	s Suspen	sions	CTR	\$	58,850	AOSTR
Computer Aided Analysis of	•	•	-	10110	OPR	\$	17,990	NSERC
etto, F D	n Onemical at	IU 1 10 W 1 10	0003003		0111	Ψ	17,000	HOLITO
Gas Processing Technolog	y/Gas-Liquid	Operations	i		OPR	\$	23,000	NSERC
Selective Gas Treating					OPR	\$	64,280	NSERC
lobinson, D B								
				n - Non Hydrocarbon Mixtures,	OPR	\$	40,608	NSERC
Particularly those Containing	ng Carbon Dio	xide, Meth	anol and	or Hydrogen Sulfide				
Seyer, F A Analysis of Transport Pher	omena in Riti	ımen/Heav	v Oil Red	novery Processes	CTR	\$	30,560	AOSTR
Shah, S L	ionicha in Bito	iiiicii/i icav	<i>y</i> 0111100	50very 1 100c33c3	0111	Ψ	00,000	7.00111
Robustness Issues in Ada	otive Control				OPR	\$	22,500	NSERC
Vanke, S E								
Investigations of Catalytic		•			CTR	\$	70,000	NCOR
•			s): Transı	mission Electron Microscope				
Optimal Chemical Routes	•				OPR	\$	71,120	NSERC
Characterization and Activ	ity of Supporte	ed Metal Ca	atalysts		OPR	\$	36,384	NSERC
Vood, R K					000	•	40.470	NOEBO
Dynamics and Control of P	rocess Syster	ns			OPR	\$	18,470	NSERC
Type of Award	No.	Δm	ount	Source of Funds	No.		Amount	
						Φ.		
Contracts Operating	5 21	\$ 269,8 \$ 688,9		NSERC Other Provincial	18 5	\$ \$	575,583 254,510	
Total		\$ 958,		Other Federal	1	\$	43,700	
Total	20	φ 330,	, 30	Other Agencies	2	\$	85,000	
				Total	26	\$	958,793	
_								
Department of Civil Engir	eering							
nvestigator	Project Ti	tle			Award		Amount	Agency
inderson, K O								
······································	d Asphalt Con	crete Mate	rials		CTR	\$	12,076	ΑT
Characteristics of Recycles	-			hermal Crackina	CTR	\$	1,300	AT
Characteristics of Recycled Evaluation of Pavements v					CTR	\$	3,300	AT
Evaluation of Pavements v		on Constru	ction in A	Niberta	CIP	LD	ച.വധ	Λ'
Evaluation of Pavements v Influence of Asphalt Ceme	nt Properties							
Evaluation of Pavements v	nt Properties on the second of				OPR OPR	\$ \$	8,000 11,520	IOL NSERC

Investigator Project Title	Award		Amount	Agency
Chan, D H				
Co-investigator with Kaiser, P K: Numerical Simulation of Room 209				
Co-investigator with Morgenstern, N R: Coal Research Grant Program - Deformation				
Finite Element Analysis of Strain Softening Soil and Shear Band Deformation	OPR	\$	12,000	NSERC
Cheng, J J R Lateral and Local Instability of Coped Beams	OPR	\$	11,520	NSERC
Cruden, D M	Orn	Ψ	11,520	NOLITO
Á Landslide Overview Map of Alberta	CTR	\$	10,000	ΑE
Geotechnical Characterization of Materials in Slope Movements in the Cordillera	OPR	\$	8,000	EMRC
isenstein, Z (1) Underground Openings in Sett Cround (2) Tunnels and Shotts in Oil Sends (2) Effect	tive OPR	\$	39,000	NSERC
(1) Underground Openings in Soft Ground. (2) Tunnels and Shafts in Oil Sands. (3) Effec Stresses Around Excavations.	ive OFR	Ψ	39,000	NOLITO
lwi, A E				
(1) Theoretical and Experimental Investigation of Bin Loads (2) Investigation of Self-limiting	ng OPR	\$	12,480	NSERC
Behaviour of Secondary Containments Berard, R				
Hydrometeorological Conditions Conducive to Ice Jam Formation	OPR	\$	5,000	EC
Hay River Ice Jam Flood Study	CTR	\$	60,000	EC
River, Lake and Offshore Ice Processes	OPR	\$	19,200	NSERC
latzinikolas, M				
Research in Masonry Veneer Walls	OPR	\$	12,000	NSERC
Irudey, S E Fish Tainting Potential of Oil Sands Wastewaters	CTR	\$	13,000	AE
Coal Research Grant Program - Coal Conversion Wastewater Treatment Technology	OPR	\$	30,000	AENR
Anaerobic Biological Degradation of Hazardous Organic Chemicals	OPR	\$	22,000	AERT
Hazardous Waste Management and Risk Assessment	OPR	\$	33,500	NSERC
Role of Support Media in Enhancing Anaerobic Biotreatment of Phenolics	OPR	\$	46,200	NSERC
Environmental Process BioTechnology Laboratory	INF	\$	57,600	NSERC
Co-investigator with Crawford, R J (Science, Chemistry): Mass Spectrometry Service				
Laboratory				
Huck, P M Evaluation of Alternative Drinking Water Treatment Processes at Pilot Scale by Means of	CTR	\$	132,380	AWWA
Mutagenicity Testing	Om	Ψ	132,300	AVVVA
Evaluation of Alternative Drinking Water Processes at Pilot Scale by Means of Mutagenic	ity OPR	\$	19,387	CE
Testing	•			
A Study using Computer Software to Model the Performance of Carbon Absorbers in a	CTR	\$	47,455	HWC
Large Canadian Drinking Water Treatment Plant	0.70	_		
Continuation of Study Entitled: Chemical and Biological Evaluation of Drinking Water Treatment Alternatives	CTR	\$	18,295	HWC
Use of Biological Processes in Drinking Water Treatment	CTR	\$	59,000	NRC
Removal of Organics from Drinking Water	OPR	\$	24,000	NSERC
Co-investigator with Hrudey, S E: Environmental Process BioTechnology	0	Ψ	21,000	1102110
Development of a New Process for Removal of Radium-226 from Uranium Tailings Deca	nts TTR	\$	79,600	NSERC
Co-investigator with Crawford, R J (Science, Chemistry): Mass Spectrometry Service			,	_
Laboratory				
lunt, J D	OPP	æ	15.000	NCEDO
Urban Travel Behavior Modelling Kaiser, P K	OPR	\$	15,000	NSERC
Numerical Simulation of Room 209 Instrument Ring	CTR	\$	38,260	AECL
Deep Borehole Rupture Mechanics	OPR	\$	70,000	NSERC
Rupture Mechanisms of Underground Openings	OPR	\$	17,280	NSERC
Kennedy, D J L	000	•	07.000	NOCEC
Transversely Loaded Clamped Steel Plates. Composite Steel-Concrete Trusses Knettig, E	OPR	\$	37,000	NSERC
Co-investigator with Hrudey, S E: Environmental Process BioTechnology				
Culak, G L				
Large-diameter Tubes Loaded in Shear or in Combined Shear and Bending	OPR	\$	30,720	NSERC
Longworth, J Behavior of Masonry Structures	OPR	\$	11,520	NSERC
MacGregor, J G	Oiti	Ψ	11,020	1406110
Strength and Stability of Reinforced Concrete Structures	OPR	\$	62,400	NSERC

Investigator Project Title	Award		Amount	Agency
Morgenstern, N R				
Coal Research Grant Program - Deformation and Progressive Failure of Open Pit Mine Highwall	OPR	\$	59,514	AENR
Co-investigator with Scott, J D: Geotechnical and Thermal Testing				
Geotechnical Behaviour of Permafrost, Oil Sands and Other Natural Materials	OPR	\$	92,160	NSERC
Geotechnical Laboratories - University of Alberta Murray, D W	INF	\$	21,120	NSERC
Prediction of Structural Behaviour	OPR	\$	26,000	NSERC
Peterson, A E	000	•		
Survey Positioning by GPS (Interferometric Method) Peterson, A W	OPR	\$	14,400	NSERC
Co-investigator with Steffler, P M: Flow and Shear Stress in Curved				
Channels Formed in Sediment	OPR	\$	18,528	NSERC
Rajaratnam, N Co-investigator with Steffler, P M: Flow and Shear Stress in Curved				
Hydraulics of Effluent Discharges into Lakes and Rivers, Hydraulics of Fishways, LDA Measurements and Numerical Simulations in Hydraulics	OPR	\$	43,104	NSERC
Scanlon, A Serviceability of Concrete Structures	ODD	Φ	40.000	NOEDO
Scott, J D	OPR	\$	18,000	NSERC
Geotechnical and Thermal Testing of Oil Sands	CTR	\$	145,284	AOSTR
Forestburg Reclamation Study, Settlement Behaviour of Mine Backfill	CTR	\$	8,121	ARC
Devon Geogrid Test Fill	CTR	\$	98,946	AT
Influence of Asphalt Cement Properties on Construction in Alberta	CTR	\$	3,300	AT
Development of Test Procedure and Material Properties for Evaluating Geogrids for Soil Reinforcement	CTR	\$	33,495	AT
Characteristics of Recycled Asphalt Concrete Materials	CTR	\$	12,076	AT
Evaluation of Pavements with Relatively Low Incidence of Thermal Cracking	CTR	\$	1,300	AT
Design Methodology for Geogrid Reinforced Soil Slopes	CTR	\$	11,830	AT
Strength - Deformation Properties of Soil-Fabric Systems Gas Exsolution Influence on Foundations on Oil Sand	OPR	\$	24,000	NSERC
Core Sampler for Oil Sands and Heavy Oil Formations	OPR	\$	77,680	NSERC
Co-investigator with Kaiser, P K: Deep Borehole Rupture Mechanics Sego, D C				
Strength and Deformation Behavior of Frozen and Unfrozen Soil	OPR	\$	13,000	NSERC
Instrumentation of CNR Sheetpile Wall, Boston Bar, B C	TTR	\$	2,380	NSERC
Simmonds, S H (1) Shell Structures (2) Reinforced Concrete Slabs	OPR	\$	23,040	NSERC
Smith, D W	Orti	Ψ	23,040	NOENO
Ozone Disinfection of Wastewater	OPR	\$	15,000	AERT
Powdered Activated Carbon Study	OPR	\$	10,000	CE
A Study of Ozonation at Canadian Water Treatment Plants	CTR	\$	14,426	CEA
Disinfection of Wastewater using Ozone Co-investigator with Hrudey, S E: Environmental Process BioTechnology	OPR	\$	30,720	NSERC
Steffler, P M				
Flow and Shear Stress in Curved Chanels	CTR	\$	25,000	AE
Turbulent Flow in Open Channels and Rivers	OPR	\$	16,320	NSERC
Teply, S Capacity Related Transportation Characteristics of Canadian Communities	OPR	\$	23,040	NSERC
Thomson, S		•		
Co-investigator with Cruden, D M: A Landslide Overview Map of Alberta				
Co-investigator with Morgenstern, N R: Coal Research Grant Program - Deformation Engineering Characteristics and Behaviour of Stiff Clay (Till) and Soft Rocks and their	OPR	\$	10.200	NSERC
Application to Engineering Projects	OFN	Ф	19,200	NOENC
Warwaruk, J	000	•	40.000	NOFF
Research in Prestressed Concrete Masonry	OPR	\$	16,000	NSERC
Type of Award No. Amount Source of Funds	No.		Amount	
Contracts 21 \$ 748,844 NSERC	36	\$	1,081,232	
Infrastructure 2 \$ 78,720 Other Provincial Operating 41 \$ 1,097,433 Other Federal	18 7	\$ \$	505,542 236,010	
Technology Transfer 2 \$ 81,980 Other Agencies	5	э \$	184,193	
Total 66 \$ 2,006,977 Total	66	\$	2,006,977	

Department of Electrical Engineering

Investigator Project Title	Award		Amount	Agency
Baltes, H P	F05		00.707	NOFFE
Spectrophotometer and Microcomputer for Sensor Laboratory	EQP	\$	68,523	NSERC
Microelectronic Sensor Modeling and Application	OPR	\$	37,248	NSERC
Organic Film Preparation for Integrated Sensors in Silicon Integrated Sensors on Silicon	EQP OPR	\$ \$	60,012 60,000	NSERC NSERC
Bollinger, K E	OFR	Φ	60,000	NOENC
Power System Control	OPR	\$	20,256	NSERC
Brett, M J Thin Films for Sensor Applications	ODB	Φ	00.000	NOCOC
Co-investigator with Baltes, H P: Spectrophotometer and Microcomputer	OPR	\$	22,000	NSERC
Co-investigator with Baltes, HP: Integrated Sensors on Silicon				
Co-investigator with Baltes, H P: Organic Film Preparation for Integrated				
Capjack, C E				
Computer Simulation Codes for Laser-Plasma Applications	OPR	\$	21,120	NSERC
Co-investigator with Seguin, H J J: High Power Magpie Laser with Plasma				
Co-investigator with Offenberger, A A: KrF Laser Facility				
Co-investigator with Seguin, H J J: High Power Laser Discharge Stabilization	0.00	•		
The Development and Use of Magnetohydrodynamic Computer Simulation Codes for Supporting Laser-Plasma Interaction Experiments Designed to Establish the Feasibility of Laser Driven Inertial Fusion.	OPR	\$	44,900	NSERC
Cervenan, M R Mode of Stabalization of a Multikilowatt C.W. CO2 Laser	ODD	Φ.	40.000	NOEDO
	OPR	\$	19,200	NSERC
Co-investigator with Seguin, H J J: High Power Laser Discharge Stabilization Cheng, Z				
Co-investigator with Seguin, H J J: High Power Laser Discharge Stabilization				
Co-investigator with Seguin, H J J: High Power Magpie Laser with Plasma				
Christensen, G S	ODD.	Φ	05 700	NCEDO
Optimization Methods Applied to Power Systems Chute, F S	OPR	\$	25,728	NSERC
Electromagnetic Heating of Oil Sands	CTR	\$	90,740	AOSTR
Electromagnetic Techniques in the in-situ Recovery of Hydrocarbon Materials	OPR	\$	29,568	NSERC
ourdle, N G Studios of Electrical and Machanical Proportion of the Contraintential Treat	000	Φ	7 000	NOEDO
Studies of Electrical and Mechanical Properties of the Gastrointestinal Tract.	OPR	\$	7,000	NSERC
Optical Fibre Communication Systems	OPR	\$	11,904	NSERC
edosejevs, R				
Co-investigator with Offenberger, A A: Loser Facility				
Co-investigator with Offenberger, A A: Laser Fusion Related Research UV Laser-Plasma Interactions	OPR	\$	28.800	NSERC
Narrow Linewidth Argon Ion Laser	EQP	φ \$	53,497	NSERC
Filanovsky, I	L G(1	Ψ	55,457	NOLITO
Circuit Techniques for Integrated Solid State Sensors	OPR	\$	17,280	NSERC
Sirczyc, E F Smodules: An Object Oriented IC Design Environment	OPR	Œ	16,000	NSERC
Gioud, P A	OFR	\$	10,000	NOENC
Coding and Modulation for Optical Fiber Communications	OPR	\$	16,700	NSERC
Gourishankar, V G				
Co-investigator with Rink, R E: Optimized Microprocessor Control (1) Minimum Sensitivity Controller Design (2) System Identification	ODD	ď	17 104	NCEDO
lames, C R	OPR	\$	17,184	NSERC
Laser-Plasma Interaction Processes	OPR	\$	19,200	NSERC
loerg, W B	000	•	04.040	NOEBO
Interactive Framework for an Integrated (VLSI) Design Environment (Ingma, Y J	OPR	\$	21,216	NSERC
Co-investigator with Bowes, K L (Medicine, Surgery and Clinical Surgery): G I Motility Studies				
Electrical and Mechanical Activity of the Digestive Tract: Modeling, Instrumen tation and Analysis. Robotic Aids for Quadriplegics	OPR	\$	16,800	NSERC
Koval, D O Reliability of Commercial and Industrial Processes Landecker, T L	OPR	\$	9,523	NSERC
Radio Astronomy Instrumentation Development and Supernova Remnant Research	OPR	\$	14,100	NSERC

Investigator	Project Title	Award		Amount	Agency
Lawson, R P W					
	of Binary Alloys/Ion Implantation	OPR	\$	11,616	NSERC
	gerton, R F (Science, Physics): Transmission Electron Microscope				
Marchand, R	offenberger, A A: KrF Laser Facility				
Modelling of Laser-Pla	- · · · · · · · · · · · · · · · · · · ·	OPR	\$	12,230	NSERC
_	apjack, C E: The Development and Use of Magnetohydrodynamic	• • • • • • • • • • • • • • • • • • • •	*	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
McMullin, J N					
Improvement in Coup Merchant, V	ling of Semiconductor Lasers to Single Mode Fibers	OPR	\$	13,248	NSERC
·	eguin, H J J: High Power Laser Discharge Stabilization				
Mowchenko, J T		0.00		4.4.70.4	
Placement and Routin	ng Algorithms for Cell-based Integrated Circuit Design	OPR	\$	14,784	NSERC
	eguin, H J J: High Power Laser Discharge Stabilization				
_	eguin, H J J: High Power Magpie Laser with Plasma				
Offenberger, A A		000	•	00.400	NOEDO
High Intensity Laser/P		OPR OPR	\$	86,400 140.000	NSERC NSERC
Laser Fusion Related	edosejevs, R: Narrow Linewidth Argon Ion Laser	OPR	\$	140,000	NSERC
KrF Laser Facility	edosejevs, n. Narrow Linewidth Argon fon Laser	INF	\$	67,800	NSERC
Rink, R E		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Ψ	07,000	NOLITO
	ssor Control of Heat Pump/Heat Storage Systems	OPR	\$	10,000	EMRC
	g in Feedback Control	OPR	\$	11,232	NSERC
Ristic, L Silicon Sensor Techno	ology	OPR	\$	18,700	NSERC
	altes, H P: Integrated Sensors on Silicon	0, 7,	*	, 0,, 00	1102110
Robinson, A M	•				
	Elevated Temperatures and Pressures	OPR	\$	17,800	NSERC
Robinson, S Co-investigator with S	eguin, H J J: High Power Laser Discharge Stabilization				
Routledge, D					
	oing of Supernova Remnants, and Development of Low-noise	OPR	\$	13,920	NSERC
Receivers	aneldik, J F: Low-Noise Microwave Amplifier Development				
Schmidt-Weinmar, H G	and and, or a low reduce who owave amplified bevelopment				
	on-Germanium Superlattices	OPR	\$	12,900	NSERC
Seguin, H J J High Powered Laser 1	Fechnology and Laser Materials Science and Processing	OPR	\$	66.816	NSERC
	aser with Plasma Electrodes Development System	EQP	\$	55,000	NSERC
	charge Stabilization with Magnetic Fields	OPR	\$	60,000	NSERC
Engineering - Laser M	•	INF	\$	10,000	NSERC
Smy, PR	La company and the second seco	000	•	50.054	NOTEDO
	reakers and Combustion Physics y Induced Turbulence in Combustion	OPR OPR	\$	52,954 57,000	NSERC NSERC
	Seguin, H J J: High Power Laser Discharge Stabilization	OFR	\$	57,000	NSERU
Tulip, J	regulit, 110 o. t high t ower caser bischarge olabilization				
Laser Applications an	d Engineering Research Institute Limited	CTR	\$	300,000	DRIE
Endoscopic Laser Sy		OPR	\$	75,000	NSERC
High Powered Lasers		OPR	\$	46,656	NSERC
High Powered Waveg		OPR	\$	65,000	NSERC
Medical Laser Facility Vaneldik, J F		INF	\$	28,800	NSERC
Cryogenic GaAsFet F	Radio Astronomy Amplifiers, New Type of Correlation Receiver,	OPR	\$	17,280	NSERC
Mapping of Several S					
Low-Noise Microwave Vermeulen, F E	e Amplifier Development Laboratory	INF	\$	34,700	NSERC
	Chute, F S: Electromagnetic Heating of Oil				
_	ic Heating for the In-situ Recovery of Fossil Fuels	OPR	\$	30,432	NSERC
Voss, W A G			•	07.100	
Microwave Power and	o instrumentation	OPR	\$	27,168	NSERC

Type of Award	No.	Amount	Source of Funds	No.		Amount
Contracts	2	\$ 390,740	NSERC	50	\$	1,705,195
Equipment	4	\$ 237,032	Other Provincial	1	\$	90,740
Infrastructure	4	\$ 141,300	Other Federal	2	\$	310,000
Operating	43	\$ 1,336,863	Total	53	\$	2,105,935
Total	53	\$ 2.105.935			•	, , , , ,

Department of Mechanical Engineering

Investigator Project Title	A	ward		Amount	Agency
Athienitis, A K		000			5 1100
Development of Detailed and Flexible Software for Building Energy Optimization Studies	Analysis and Systematic	OPR	\$	9,600	EMRC
Efficient and Accurate Modelling of Passive Solar Buildings - Room Exchanges and Night Insulation	Interior Radiation	OPR	\$	10,160	NSERC
Bellow, D G					
Static and Dynamic Behavior of Machine Elements		OPR	\$	21,190	NSERC
Electrochemical Corrosion Measurement System - Potentiostat		EQP	\$	16,600	NSERC
To Investigate Methods of Reducing Costs and Improving Quality in Products at the Edmonton Steel Works Plant	the Production of Steel	CTR	\$	9,867	STEL
Budney, D R					
Co-investigator with Moreau, M J (Medicine, Medicine and Clinical Evaluation of Spinal	Medicine): Experimental				
Reinforced Openings/Fracture Mechanics		OPR	\$	11,940	NSERC
Checkel, M D			_		
Turbulence - Combustion Interaction for Spark Ignition Engines		OPR	\$	14,680	NSERC
Co-investigator with Wilson, D J: Laser Light Sheet Flow Visualizat	on				
Cheng, K C Studies of Cold Regions and Convective Heat Transfer Problems		OPR	æ	27.250	NSERC
Studies of Cold Regions and Convective Heat Transfer Problems Colbourne, J R	·	OFN	\$	37,350	NOENC
Gear Geometry and Tooth Strength		OPR	\$	17,682	NSERC
Craggs, A			•	, , , , , , , , ,	
Co-investigator with Faulkner, M G: Mechanical Engineering Acous	tics				
Finite Element Acoustics	•	OPR	\$	21,080	NSERC
Dale, J D					
Co-investigator with Wilson, D J: Laser Light Sheet Flow Visualizati					
Combustion Ignition Studies and Spark Ignition Engine Performand	e	OPR	\$	21,596	NSERC
Ellyin, F Materials Response and Reliability of Components under Various S	tates of Strees and	OPR	\$	46,560	NSERC
Environments	dates of Stress and	01 11	Ψ	+0,500	NOLITO
Faulkner, M G					
Mechanics of Dental Problems/Acoustical Testing Techniques		OPR	\$	21,080	NSERC
International Symposium on Cold Regions Heat Transfer, Universit Alberta, June 4-7, 1987.	of Alberta, Edmonton,	CFC	\$	5,000	NSERC
Mechanical Engineering Acoustics and Noise Unit		INF	\$	9,500	NSERC
A Study of the Fuel Efficiencies of a Small Engine with and without	a Low Friction Coating	CTR	\$	1,080	SRMP
Forest, T W	a Low I netion coating	OIII	Ψ	1,000	STUVII
Phase Changes in Liquids	,	OPR	\$	15,552	NSERC
Co-investigator with Wilson, D J: Laser Light Sheet Flow Visualizat	on		·	,	
Gates, E M					
Marine Icing		OPR	\$	85,500	NSERC
Modelling of Atmospheric Icing of Structures		OPR	\$	14,680	NSERC
A Waterjet Evacuation Tool		TTR	\$	62,200	NSERC
Haddow, J B					
Studies in Non-linear Wave Propagation	ı	OPR	\$	22,240	NSERC
Kennedy, J S	12.1	000	Φ	0.710	NOEDO
Elastohydrodynamic Lubrication of Soft Materials. Blood Flow to the	e Klaneys.	OPR	\$	9,710	NSERC
Lipsett, A W Dynamic Response of Offshore Structures in Waves and Currents		OPR	\$	14,910	NSERC
Co-investigator with Wilson, D J: Laser Light Sheet Flow Visualizat				,	
Lock, G S H	·····				
Heat Losses through Uninsulated Wall Spaces		OPR	\$	9,400	AHPW
Development of Carnot Engine for Northern Application		OPR	\$	8,600	EMRC
(1) Heat Transfer Near Partially Submerged/Buried Tubes. (2) Con		OPR	\$	15,120	NSERC
(1) Heat Hallster Near Fathally Submergeor Burlow Fabos. (2) Oon			-	,	,

Investigator	Project Ti	tle		Award		Amount	Agency
Mioduchowski, A							
Vibrations of Elastic Eler	ments and Media	a		OPR	\$	18,555	NSERC
Rodkiewicz, C M Arterial Blood Flow: Lubi	rication			OPR	\$	29,090	NSERC
Simms, B W				_	· ·		
Information Processing I Foogood, R W	Model of Technic	cal Organization	าร	OPR	\$	9,600	NSERC
Industrial Robotics - Dyn	namic Simulation	and Motion Pl	anning	OPR	\$	12,457	NSERC
/arty, R L Application of Laser-Dop	onler Anemomet	ry to Fluid Med	nanice	OPR	\$	10,278	NSERC
/itovec, F H				Orit	Ψ	10,276	NOENC
Co-investigator with Bell	ow, D G: Electro	ochemical Corre	osion Measurement				
Wilson, D J Predicting Exposure Haz	zards from Toxic	Gas Releases		OPR	\$	35,800	ACOH
Atmospheric Pollution Di				OPR	\$	30,882	NSERC
Laser Light Sheet Flow \	Visualization Sys	stem		EQP	\$	46,830	NSERC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences		\$ 5,000	NSERC	28	\$	652,022	
Contracts	2	\$ 10,947	Other Provincial	2	\$	45,200	
Equipment	2	\$ 63,430	Other Federal	2	\$	18,200	
Infrastructure	1	\$ 9,500	Other Agencies	2	\$	10,947	
Operating Technology Transfer		\$ 575,292	Total	34	\$	726,369	
Technology Transfer Total		\$ 62,200 \$ 726,369					
		,,					
Department of Mining, N	Metallurgical	and Petrol	eum Engineering				
nvestigator	Project Ti	tle		Award		Amount	Agency
arron, K							
	e in Coal Mines			OPP	æ	10 500	NICEDO
Design Criteria for Pillars	s in Coal Mines			OPR	\$	18,528	NSERC
Design Criteria for Pillars entsen, R G Analysis of the Displace		id by Another		OPR OPR	\$ \$	18,528 18,000	NSERC NSERC
Design Criteria for Pillars entsen, R G Analysis of the Displace	ment of One Flui	•	s		\$	18,000	
Design Criteria for Pillars entsen, R G Analysis of the Displaces erkowitz, N Supercritical Gas Extrac Generation of Synthetic	ment of One Flui	-Donor System		OPR			NSERC
Design Criteria for Pillars Rentsen, R G Analysis of the Displaces Berkowitz, N Supercritical Gas Extract Generation of Synthetic Stsell, T H	ment of One Flui tion of Coal in H Liquid Hydrocarl	-Donor System		OPR OPR OPR	\$ \$ \$	18,000 82,275 31,192	NSERC AENR NSERC
Design Criteria for Pillars lentsen, R G Analysis of the Displaces lerkowitz, N Supercritical Gas Extrac Generation of Synthetic litsell, T H Ceramic Electrolytes and	ment of One Flui tion of Coal in H Liquid Hydrocarl d Metal Extractio	-Donor System bons from Coal on from Fly Ash		OPR OPR	\$	18,000 82,275	NSERC AENR
Design Criteria for Pillars lentsen, R G Analysis of the Displace lerkowitz, N Supercritical Gas Extrac Generation of Synthetic ltsell, T H Ceramic Electrolytes and Co-investigator with Sca Research	ment of One Flui tion of Coal in H Liquid Hydrocarl d Metal Extractio	-Donor System bons from Coal on from Fly Ash		OPR OPR OPR	\$ \$ \$	18,000 82,275 31,192	NSERC AENR NSERC
Design Criteria for Pillars entsen, R G Analysis of the Displace erkowitz, N Supercritical Gas Extrac Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Sca Research arouq Ali, S M	ment of One Fluition of Coal in H Liquid Hydrocarl d Metal Extraction orfe, C M (Scienc	-Donor System bons from Coal on from Fly Ash se, Geology): H	igh-pressure Apparatus for	OPR OPR OPR	\$ \$ \$	18,000 82,275 31,192 18,000	NSERC AENR NSERC NSERC
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extrac Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Sca Research arouq Ali, S M Scaled Model Studies of	ment of One Fluition of Coal in H Liquid Hydrocarl d Metal Extraction orfe, C M (Scienc	-Donor System bons from Coal on from Fly Ash se, Geology): H	igh-pressure Apparatus for	OPR OPR OPR OPR	\$ \$ \$ \$	18,000 82,275 31,192 18,000	NSERC AENR NSERC NSERC
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extrac Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Sca Research arouq Ali, S M Scaled Model Studies of Mobility Control	ment of One Fluition of Coal in H Liquid Hydrocarl d Metal Extraction orfe, C M (Science the Immiscible	-Donor System bons from Coal on from Fly Ash se, Geology): H Carbon Dioxide	igh-pressure Apparatus for Flooding Process	OPR OPR OPR CTR	\$ \$ \$	18,000 82,275 31,192 18,000 102,890 126,040	NSERC AENR NSERC NSERC AOSTR
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scate Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of C M (Science of the Immiscible of	-Donor System bons from Coal on from Fly Ash ee, Geology): H Carbon Dioxide ous Media at E	igh-pressure Apparatus for Flooding Process levated Temperatures	OPR OPR OPR CTR CTR CTR	\$ \$ \$ \$	18,000 82,275 31,192 18,000	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scates Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of C M (Science of the Immiscible of	-Donor System bons from Coal on from Fly Ash ee, Geology): H Carbon Dioxide ous Media at E	igh-pressure Apparatus for Flooding Process	OPR OPR OPR CTR	\$ \$\$ \$	18,000 82,275 31,192 18,000 102,890 126,040	NSERC AENR NSERC NSERC AOSTR AOSTR
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Sca Research farouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction orfe, C M (Science of the Immiscible of femulsions in Pore formation Fracture	-Donor System bons from Coal on from Fly Ash be, Geology): H Carbon Dioxide ous Media at E ring During Ste	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and	OPR OPR OPR CTR CTR CTR CTR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Sca Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction Steam Injection Experim	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Commisciple of the Immisciple of the	-Donor System bons from Coal on from Fly Ash be, Geology): H Carbon Dioxide ous Media at E ring During Ste	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and	OPR OPR OPR CTR CTR CTR CTR CTR	* * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR AOSTR
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scates Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of Etherolytes and Formation and Flow of Etherolytes and Studies of Mobility Control Formation Electrolytes and Flow of Etherolytes and Flow of	ment of One Fluition of Coal in H Liquid Hydrocarl d Metal Extraction of the Immiscible of formation Fracture ments in a Scaled less for Oil Reco	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II inal Reservoirs	OPR OPR OPR CTR CTR CTR CTR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR AOSTR
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scar Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction Steam Injection Experim Steam-Foam Drive Proc Experimental Simulation Sintoff, B C	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of the Immiscible of formation Fracture ments in a Scaled less for Oil Reco	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II inal Reservoirs	OPR OPR OPR CTR CTR CTR CTR CTR OPR	\$ \$\$ \$ \$ \$ \$ \$ \$ \$ \$	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scates Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction Steam Injection Experim Steam-Foam Drive Proc Experimental Simulation lintoff, B C Froth Flotation of Fine M	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of the Immiscible of formation Fracture ments in a Scaled less for Oil Reco	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II inal Reservoirs	OPR OPR OPR CTR CTR CTR CTR CTR CTR	\$ \$\$ \$ \$ \$ \$ \$ \$	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scates Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction Steam Injection Experim Steam-Foam Drive Proce Experimental Simulation stintoff, B C Froth Flotation of Fine M Patchett, B M Narrow Gap Welding of	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of the Immiscible of formations in Pore formation Fracture ments in a Scaled ments in a Scaled mess for Oil Reco mof a Horizontal detallurgical Coal High-Strength M	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II inal Reservoirs	OPR OPR OPR CTR CTR CTR CTR CTR OPR	\$ \$\$ \$ \$ \$ \$ \$ \$ \$ \$	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE
Design Criteria for Pillars entsen, R G Analysis of the Displacer erkowitz, N Supercritical Gas Extract Generation of Synthetic tsell, T H Ceramic Electrolytes and Co-investigator with Scar Research arouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction Steam Injection Experim Steam-Foam Drive Proc Experimental Simulation fintoff, B C Froth Flotation of Fine Metalises of Metalistic Simulation of F Forth Flotation of Fine Metalistic Simulation of Fine Metali	ment of One Fluition of Coal in H Liquid Hydrocarl d Metal Extraction of Communication f the Immiscible of formation Fractur ments in a Scaled less for Oil Reco of a Horizontal fletallurgical Coal High-Strength M	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II inal Reservoirs Oil Recovery	OPR OPR OPR CTR CTR CTR CTR OPR OPR	\$ \$\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC
Design Criteria for Pillars Rentsen, R G Analysis of the Displacer Berkowitz, N Supercritical Gas Extract Generation of Synthetic Estell, T H Ceramic Electrolytes and Co-investigator with Scate Research Farouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of Ether Realistic Simulation of Ferformance Prediction Steam Injection Experimental Simulation Fintoff, B C Froth Flotation of Fine More Proceduction Fatchett, B M Narrow Gap Welding of Disbonding Assessment Physical Behavior of Sul Mechanical Properties of	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of the Immiscible of fithe Immiscible of formation Fracture of a Horizontal letallurgical Coal High-Strength M is bmerged Arc Weiter	-Donor System cons from Coal on from Fly Ash ce, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy I larine Steels are elding Fluxes	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II inal Reservoirs Oil Recovery	OPR OPR OPR CTR CTR CTR CTR OPR OPR OPR CTR	\$ \$\$ \$ \$ \$\$ \$\$ \$\$ \$\$ \$	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC
Design Criteria for Pillars Pentsen, R G Analysis of the Displacer Perkowitz, N Supercritical Gas Extract Generation of Synthetic Personal Electrolytes and Co-investigator with Scare Research Personal Model Studies of Mobility Control Formation and Flow of Ereformance Prediction Steam Injection Experimental Simulation Performance Prediction Steam Foam Drive Proceus Experimental Simulation Personal Simulation of Fine Model Patchett, B M Narrow Gap Welding of Disbonding Assessment Physical Behavior of Sul Mechanical Properties of Mayman, M L	ment of One Fluition of Coal in H Liquid Hydrocarl d Metal Extraction of Coal in H Liquid Hydrocarl d Metal Extraction of the Immiscible of formation Fractur ments in a Scaled ments in a Scale	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy I larine Steels are elding Fluxes MAW Joints in	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II pinal Reservoirs Oil Recovery ad Stainless Steel Overlay C-Mn Pressure Vessel Steels	OPR OPR OPR CTR CTR CTR CTR OPR OPR OPR OPR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515 13,500	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC
Design Criteria for Pillars Pentsen, R G Analysis of the Displacer Perkowitz, N Supercritical Gas Extract Generation of Synthetic Personal Electrolytes and Co-investigator with Scare Research Personal Model Studies of Mobility Control Formation and Flow of Erent Realistic Simulation of Formation Experimental Simulation Steam Injection Experimental Simulation Performance Prediction Steam-Foam Drive Proce Experimental Simulation Fintoff, B C Froth Flotation of Fine Model Patchett, B M Narrow Gap Welding of Disbonding Assessment Physical Behavior of Sul Mechanical Properties of Mayman, M L Co-investigator with Egental Properties of Mayman, M L Co-investigator with Egental Properties of Mayman, M L	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of the Immiscible of fithe Immiscible of formation Fracture of a Horizontal detallurgical Coal High-Strength M of Narrow Gap G orton, R F (Scien	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Modevery from Marg Well for Heavy I larine Steels ar Belding Fluxes MAW Joints in ce, Physics): Teons of the coal of	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II pinal Reservoirs Oil Recovery and Stainless Steel Overlay C-Mn Pressure Vessel Steels ransmission Electron Microscope.	OPR OPR OPR CTR CTR CTR CTR OPR OPR OPR OPR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515 13,500 10,000	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC
Design Criteria for Pillars Pentsen, R G Analysis of the Displacer Perkowitz, N Supercritical Gas Extract Generation of Synthetic Personal Electrolytes and Co-investigator with Scar Research Personal Stadies of Mobility Control Formation and Flow of E Realistic Simulation of F Performance Prediction Steam Injection Experim Steam-Foam Drive Proc Experimental Simulation Pertorn Flotation of Fine M Patchett, B M Narrow Gap Welding of Disbonding Assessment Physical Behavior of Sul Mechanical Properties of Nayman, M L Co-investigator with Ege Type of Award	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of the Immiscible of fithe Immiscible of fithe Immiscible of formation Fracture of an Acceptance of a Horizontal fitallurgical Coal High-Strength M fither Marrow Gap G erton, R F (Scien No.	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Step 1 Physical Mode very from Marg Well for Heavy I larine Steels are elding Fluxes MAW Joints in ce, Physics): Tec.	igh-pressure Apparatus for Plooding Process levated Temperatures am Injection Operations and el - Phase II pinal Reservoirs Oil Recovery ad Stainless Steel Overlay C-Mn Pressure Vessel Steels ransmission Electron Microscope . Source of Funds	OPR OPR OPR CTR CTR CTR CTR OPR OPR OPR OPR CTR OPR OPR OPR OPR	\$ \$\$ \$ \$ \$\$\$\$ \$ \$\$\$ \$ \$	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515 13,500 10,000 Amount	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC
Design Criteria for Pillars Pentsen, R G Analysis of the Displacer Perkowitz, N Supercritical Gas Extract Generation of Synthetic Personal Electrolytes and Co-investigator with Scares Research Personal State of Model Studies of Mobility Control Formation and Flow of Erealistic Simulation of Frenderiction Steam Injection Experimental Simulation Steam-Foam Drive Procent Experimental Simulation Performance Prediction Steam-Foam Drive Procent Experimental Simulation Fintoff, B C Froth Flotation of Fine Model Properties of Sulform Mechanical Proper	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of Metal Extraction of the Immiscible of the Immiscible of mulsions in Portion ormation Fracturation of a Scaled of a Horizontal detallurgical Coal High-Strength M of Narrow Gap G erton, R F (Scien No. 6	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Mode overy from Marg Well for Heavy I larine Steels are leding Fluxes MAW Joints in ce, Physics): Tanount \$573,263	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II pinal Reservoirs Oil Recovery Ind Stainless Steel Overlay C-Mn Pressure Vessel Steels ransmission Electron Microscope . Source of Funds NSERC	OPR OPR OPR OPR CTR CTR CTR OPR OPR OPR OPR CTR OPR OPR OPR OPR OPR OPR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515 13,500 10,000 Amount 134,560	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC
Design Criteria for Pillars Rentsen, R G Analysis of the Displacer Berkowitz, N Supercritical Gas Extract Generation of Synthetic Estell, T H Ceramic Electrolytes and Co-investigator with Scate Research Farouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of Ethe Realistic Simulation of Ferformance Prediction Steam Injection Experimental Simulation Fintoff, B C Froth Flotation of Fine More Proceduction Fatchett, B M Narrow Gap Welding of Disbonding Assessment Physical Behavior of Sulf Mechanical Properties of More Propertie	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of Metal Extraction of the Immiscible of the Immiscible of the Immiscible of the Immiscible of ormation Fracture of a Horizontal of a Horizontal detallurgical Coal High-Strength M of Narrow Gap G or of Reconsideration	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Mode very from Marg Well for Heavy I larine Steels are leding Fluxes MAW Joints in ce, Physics): The Carbon Steels are steels are leding Fluxes MAW Joints in ce, Physics): The Carbon Steels are steels are leding Fluxes MAW Joints in ce, Physics): The Carbon Steels are steels are leding Fluxes MAW Joints in ce, Physics): The Carbon Steels are steels are leding Fluxes MAW Joints in ce, Physics): The Carbon Steels are st	igh-pressure Apparatus for Plooding Process levated Temperatures am Injection Operations and el - Phase II final Reservoirs Oil Recovery C-Mn Pressure Vessel Steels ransmission Electron Microscope . Source of Funds NSERC Other Provincial	OPR OPR OPR OPR CTR CTR CTR CTR OPR OPR OPR CTR OPR OPR T OPR OPR OPR OPR OPR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515 13,500 10,000 Amount 134,560 437,053	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC
Design Criteria for Pillars Bentsen, R G Analysis of the Displacer Berkowitz, N Supercritical Gas Extract Generation of Synthetic Etsell, T H Ceramic Electrolytes and Co-investigator with Scate Research Farouq Ali, S M Scaled Model Studies of Mobility Control Formation and Flow of Ethe Realistic Simulation of Ferformance Prediction Steam Injection Experimental Simulation Steam-Foam Drive Procet Experimental Simulation Filintoff, B C Froth Flotation of Fine Method Patchett, B M Narrow Gap Welding of Disbonding Assessment Physical Behavior of Sulf Mechanical Properties of Mayman, M L Co-investigator with Ege Type of Award Contracts	ment of One Fluition of Coal in H Liquid Hydrocard d Metal Extraction of Coal in H Liquid Hydrocard d Metal Extraction of Metal Extraction of the Immiscible of the Immiscible of the Immiscible of the Immiscible of ormation Fracture of a Horizontal of a Horizontal detallurgical Coal High-Strength M of Narrow Gap G or of Reconsideration	-Donor System bons from Coal on from Fly Ash be, Geology): He Carbon Dioxide ous Media at Ering During Stell Physical Mode overy from Marg Well for Heavy I larine Steels are leding Fluxes MAW Joints in ce, Physics): Tanount \$573,263	igh-pressure Apparatus for Flooding Process levated Temperatures am Injection Operations and el - Phase II pinal Reservoirs Oil Recovery Ind Stainless Steel Overlay C-Mn Pressure Vessel Steels ransmission Electron Microscope . Source of Funds NSERC	OPR OPR OPR OPR CTR CTR CTR OPR OPR OPR OPR CTR OPR OPR OPR OPR OPR OPR	* * * * * * * * * * * * * * * * * * * *	18,000 82,275 31,192 18,000 102,890 126,040 83,800 42,048 158,970 19,750 8,000 15,590 59,515 13,500 10,000 Amount 134,560	NSERC AENR NSERC NSERC AOSTR AOSTR AOSTR AOSTR EMRC NSERC PAE NSERC EMRC NSERC

Faculty of Extension

Type of Award	No.	Amount	Source of Funds	No.	Amount
Infrastructure	1	\$ 4,000	Other Agencies	1	\$ 4,000
Total	1	\$ 4,000	Total	1	\$ 4,000

Faculty of Extension

Investigator	Project Title	Award	Amount	Agency
Bray, C				-
Title Word Inde	ex - Canadian Women's Periodicals	INF \$	4,000	CRIAW

Faculty of Home Economics

Type of Award	No.	Amount	Source of Funds	No.	Amount
Contracts	1	\$ 20,643	NSERC	6	\$ 282,862
Equipment	1	\$ 31,066	SSHRC	1	\$ 36,483
Operating	14	\$ 499,021	Other Provincial	5	\$ 146,200
Total	16	\$ 550,730	Other Federal	1	\$ 20,643
			Other Agencies	3	\$ 64,542
			Total	16	\$ 550,730

Department of Clothing and Textiles

Investigator	Project Title	Award	Amount	Agency
Crown, E M				
Systematic Asse	ssment of Protective Clothing for Alberta Workers	OPR	\$ 50,000	ACOH
Co-investigator v	vith Kerr, N: Limiting Pesticide Exposure through			
Effect of Constru	ction and Design on Fire Hazards Associated with Children's Sleepware	CTR	\$ 20,643	CCAC
Kernaleguen, A	·			
Video Cassettes	on Clothing for Persons with Special Needs	OPR	\$ 16,500	WRFN
Kerr, N				
Limiting Pesticid	e Exposure through Textile Cleaning Procedures and Selection of Clothing	OPR	\$ 41,000	ARCA
Diabanda F A				

Richards, E A

Co-investigator with Scott, J D (Engineering, Civil Engineering): Devon Geogrid Test Fill . . .

Co-investigator with Scott, J D (Engineering, Civil Engineering): Design Methodology for Geogrid . . .

Co-investigator with Scott, J D (Engineering, Civil Engineering): Development of Test Procedure and \dots

Rigakis, K B

Co-investigator with Crown, E M: Systematic Assessment of Protective . . .

Co-investigator with Kerr, N: Limiting Pesticide Exposure through . . .

Type of Award	No.	Amount	Source of Funds	No.	Amount
Contracts	1	\$ 20,643	Other Provincial	3	\$ 107,500
Operating	3	\$ 107,500	Other Federal	1	\$ 20,643
Total	4	\$ 128,143	Total	4	\$ 128,143

Department of	of Fam	nily Studies
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Investigator	Project	Title			Award		Amount	Agency
	h Kieren, D K: Probl	em Sc	olving Phasing in	n Families				
Kieren, D K Problem Solving P	hasing in Families W	lith ar	Adolescent Dis	photic	OPR	\$	36,483	SSHRC
Morrison, F J	nasing in rainines v	illi ai	Adolescent Die	ibelic	Oin	Ψ	30,403	Johno
•	ading Disability: A Re	econc	eptualization		OPR	\$	18,700	AMHAC
Word Learning in F	Reading Disabled Ch	ildren			OPR	\$	22,856	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	3	\$	78,039	NSERC	1	\$	22,856	
				SSHRC	1	\$	36,483	
				Other Provincial	1	\$ \$	18,700	
				Total	3	Þ	78,039	
Department of Food	ds and Nutrition	ì						
Investigator	Project				Award		Amount	Agency
Basu, T K					_			
	d Nutritional Survey	of a G	roup of Elderly	People in Edmonton	OPR	\$	12,142	KSC
Clandinin, M T Modulation of Adio	ocyte Insulin Recept	or Fu	nctions Change	s in Diet Fat Composition	OPR	\$	45,600	CDA
•	h Thomson, A B R (I		_	nd Clinical Medicine): Critical	• • • • • • • • • • • • • • • • • • • •	•	.0,000	C = 7 · 1
	brane Structure and	Func	tion by Diet Fat		OPR	\$	58,500	NSERC
	for Existing Isotope		-		EQP	\$	31,066	NSERC
•	he in-vivo Significan		•	erations in Membrane Structure	OPR	\$	114,000	NSERC
Field, C J								
Co-investigator wit	h Clandinin, M T: Mo	dulati	on of Adipocyte	Insulin				
Hawrysh, Z J	of Canala Oila and (امممار	Oil Braduata		ODD	æ	20.000	ADC A
	of Canola Oils and O			Dannana Conface Mathedalam.	OPR OPR	\$	20,000	ARCA
D		ur yea	ast Bread using	Response Surface Methodology	UPR	\$	6,800	MSI
•							00.000	NOTEDO
Studies of Canola					OPR	\$	38,200	NSERC
Studies of Canola Johnston, J L	Oil Stability ary Tyrosine, Proteir		Sodium on Cen	tral and Peripheral Sympathetic			38,200 18,240	NSERC NSERC
Studies of Canola Johnston, J L The Effects of Diet	Oil Stability ary Tyrosine, Proteir		Sodium on Cen Amount		OPR	\$		
Studies of Canola Johnston, J L The Effects of Diet Activity in Lean Mid	Oil Stability ary Tyrosine, Proteir ce	and		tral and Peripheral Sympathetic	OPR OPR	\$	18,240	
Studies of Canola Johnston, J L The Effects of Diet Activity in Lean Mid Type of Award Equipment Operating	Oil Stability ary Tyrosine, Proteir ce No. 1 8	s \$	Amount	tral and Peripheral Sympathetic Source of Funds NSERC Other Provincial	OPR OPR No. 5 1	\$ \$ \$	18,240 Amount 260,006 20,000	
Studies of Canola Johnston, J L The Effects of Diet Activity in Lean Mid Type of Award Equipment	Oil Stability ary Tyrosine, Proteir ce No. 1	and	Amount 31,066	tral and Peripheral Sympathetic Source of Funds NSERC	OPR OPR <i>No.</i> 5	\$ \$	18,240 Amount 260,006	

Faculty of Law

Type of Award	No.	Amount	Source of Funds	No.	Amount
Infrastructure	4	\$ 115,943	Other Agencies	4	\$ 115,943
Total	4	\$ 115.943	Total	4	\$ 115,943

Faculty	of Law
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nmunications and Labour Law Database	INF	\$	32,150	ALF
	INF	\$	32,150	Al.F
arter of Bights Detabage	INF	\$	32,150	Al.F
arter of Bights Database				
arter of Dighta Database				
arter of Rights Database				
•				
abase	INF	\$	12,924	ALF
	INF	\$	28,357	ALF
arter of Rights Database				
Law Institute)	INF	\$	42,512	ALF
	urter of Rights Database Law Institute)	arter of Rights Database	arter of Rights Database	arter of Rights Database

Faculty of Library Science

Type of Award	No.		Amount	Source of Funds	No.	Amount
Operating	3	\$	24,773	SSHRC	1	\$ 14,673
Total	3	\$	24,773	Other Provincial	1	\$ 9,200
		·	ŕ	Other Agencies	1	\$ 900
				Total	3	\$ 24,773

Faculty of Library Science

Investigator	Project Title	Award	Amount	Agency
Schrader, A M				
Challen	ges to Intellectual Freedom in Canadian Public Libraries	OPR	\$ 9,200	AFLA
	estigation of the Availability of Information on World Peace and Nuclear Disarmament adian Public Libraries	OPR	\$ 900	CDLA
Strathern, G M Canadia	1 an Studies - Research Tools Program: Alberta Newspapers 1880-1982: A Guide	OPR	\$ 14,673	SSHRC

Faculty of Medicine

Type of Award	No.		Amount	Source of Funds	No.	Amount
Conferences	7	\$	90,381	AHFMR	30	\$ 3,589,114
Contracts	13	\$	636,424	MRC	84	\$ 5,816,349
Equipment	4	\$	144,615	NSERC	5	\$ 136,042
Infrastructure	2	\$	177,835	SSHRC	1	\$ 16,030
Operating	192	\$	13.284.500	Other Provincial	32	\$ 1,753,315
Technology Transfer	2	\$	55,000	Other Federal	6	\$ 145,887
Total	220	\$	14,388,756	Other Agencies	62	\$ 2,932,018
		•	, , ,	Total	220	\$ 14,388,756

aculty of Medicine							
estigator	Project Title			Award		Amount	Agency
Development of a Medical Design Centre & Workshop - Service Function for the Heritage Bldg, Heritage Funded Individuals Faculty of Medicine, Other Investigators Involved in Medical Research incl. the University of Calgary General Research Grant to the Dean for the Support of Research in the Faculty of Medicine					\$	45,000	AHFMR
					\$	45,000	MRC
Type of Award	rd No. Amount Source of Funds					Amount	
Infrastructure	1 \$	45,000	AHFMR	1	\$	45,000	
Operating Total	1 \$ 2 \$	45,000 90,000	MRC Total	1 2	\$ \$	45,000 90,000	
epartment of Anatomy							
vestigator	Project Title			Award		Amount	Agency
agnall, K M Tissue Morphogenesis a Involvement in Vertebral		ell Migration as I	Evidenced by Somitic	OPR	\$	4,320	NSERC
Neuropeptides and Cardi	Neuropeptides and Cardiovascular Regulation				\$	39,629	MRC
cPherson, B R Colonic Mucus in Inflammation and Carcinogenesis los, N C					\$	30,277	ACB
Intrinsic Cellular Factors and Their Roles in Pattern Formation by Neural Crest Cells urphy, R A					\$	43,692	MRC
Nerve Growth Factor: An	alysis in Iris			OPR	\$	383,000	AHFMR
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	5 6	500,918	AHFMR	1	\$	383,000	
Operating	5 \$	500,510					
Operating	5 \$	500,916	MRC	2	\$	83,321	
Operating	5 \$	500,916					
. •			MRC NSERC Other Provincial	2 1 1	\$ \$ \$	83,321 4,320 30,277	
epartment of Applied S	Sciences in Me		MRC NSERC Other Provincial	2 1 1	\$ \$ \$	83,321 4,320 30,277	Agency
epartment of Applied S vestigator angartner, T N	Sciences in Me Project Title	dicine	MRC NSERC Other Provincial	2 1 1 5	\$ \$ \$	83,321 4,320 30,277 500,918	Agency
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic	Sciences in Me Project Title T, B (Surgery and C	dicine linical Surgery):	MRC NSERC Other Provincial Total Studies on the Prevention of	2 1 1 5	\$ \$ \$	83,321 4,320 30,277 500,918	Agency
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Ove	Sciences in Me Project Title r, B (Surgery and Conton, T R: A Clinica	dicine linical Surgery):	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation	2 1 1 5	\$ \$ \$	83,321 4,320 30,277 500,918	Agency
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Ove verton, T R Co-investigator with Weir	Sciences in Me Project Title r, B (Surgery and Conton, T R: A Clinica	dicine linical Surgery):	MRC NSERC Other Provincial Total Studies on the Prevention of	2 1 1 5	\$ \$ \$	83,321 4,320 30,277 500,918	Agency
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Ove verton, T R Co-investigator with Weir Chronic A Clinical Trial of Skeleta	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton)	edicine linical Surgery): I Trial of Skeleta Elinical Surgery):	MRC NSERC Other Provincial Total Studies on the Prevention of Al Activation Studies on the Prevention of	2 1 1 5	\$ \$ \$	83,321 4,320 30,277 500,918	Agency MRC
epartment of Applied Sovestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Overton, T R Co-investigator with Weir Chronic A Clinical Trial of Skeleta	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) All Activation in Heal	dicine linical Surgery): I Trial of Skeleta linical Surgery): thy Postmenopa	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women	2 1 1 5	\$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i>	
Department of Applied Sovestigator angartner, T N Co-investigator with Wein Chronic Co-investigator with Oververton, T R Co-investigator with Wein Chronic A Clinical Trial of Skeleta anyder, R E	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) All Activation in Heal	dicine linical Surgery): I Trial of Skeleta linical Surgery): thy Postmenopa	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women	2 1 1 5 Award	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i>	MRC
epartment of Applied Sevestigator angartner, T N Co-investigator with Weire Chronic Co-investigator with Overton, T R Co-investigator with Weire Chronic A Clinical Trial of Skeleta anyder, R E The Study of Axonal Trail	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) All Activation in Heal Insport Using a Mul	dicine linical Surgery): I Trial of Skeleta linical Surgery): thy Postmenopa	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women al Counter	2 1 1 5 Award	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i> 60,263 37,315	MRC
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Ove verton, T R Co-investigator with Weir Chronic A Clinical Trial of Skeleta nyder, R E The Study of Axonal Trai Operating	Sciences in Me Project Title r, B (Surgery and Conton, T R: A Clinical r, B (Surgery and Conton) al Activation in Heal ansport Using a Multiple (Surgery and Conton) istry	dicine linical Surgery): I Trial of Skeleta linical Surgery): thy Postmenopa	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women al Counter	2 1 1 5 Award OPR OPR	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i> 60,263 37,315 97,578	MRC MRC
Department of Applied Sovestigator Ingartner, T N Co-investigator with Weir Chronic Co-investigator with Oververton, T R Co-investigator with Weir Chronic A Clinical Trial of Skeleta Sinyder, R E The Study of Axonal Trail Operating Department of Biochemovestigator	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) All Activation in Heal Insport Using a Mul	dicine linical Surgery): I Trial of Skeleta linical Surgery): thy Postmenopa	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women al Counter	2 1 1 5 Award	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i> 60,263 37,315	MRC
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Ove verton, T R Co-investigator with Weir Chronic A Clinical Trial of Skeleta nyder, R E The Study of Axonal Trai Operating repartment of Biochem evestigator nderson, W F Co-investigator with Kay leackley, R C	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) Al Activation in Heal Activ	linical Surgery): I Trial of Skeleta Ilinical Surgery): thy Postmenopa tiple Proportiona	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women al Counter MRC	2 1 1 5 Award OPR OPR	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i> 60,263 37,315 97,578	MRC MRC
epartment of Applied S vestigator angartner, T N Co-investigator with Weir Chronic Co-investigator with Ove verton, T R Co-investigator with Weir Chronic A Clinical Trial of Skeleta nyder, R E The Study of Axonal Trai Operating epartment of Biochem vestigator nderson, W F Co-investigator with Kay leackley, R C Co-investigator with Pae	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) A Cativation in Heal A Consport Using a Multiple Stry Project Title The Conton of the Conton	linical Surgery): I Trial of Skeleta Ilinical Surgery): thy Postmenopa tiple Proportiona	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women al Counter MRC MRC	2 1 1 5 Award OPR OPR	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i> 60,263 37,315 97,578	MRC MRC
epartment of Applied Sevestigator angartner, T N Co-investigator with Weire Chronic Co-investigator with Overence werton, T R Co-investigator with Weire Chronic A Clinical Trial of Skeleta anyder, R E The Study of Axonal Transport of Biochem ovestigator nderson, W F Co-investigator with Kay leackley, R C	Sciences in Me Project Title T, B (Surgery and Conton, T R: A Clinical T, B (Surgery and Conton) I Activation in Heal Insport Using a Multiple Stry Project Title The Conton of	linical Surgery): I Trial of Skeleta Ilinical Surgery): thy Postmenopa tiple Proportional atein Structure a mmunotherapy and Expressio	MRC NSERC Other Provincial Total Studies on the Prevention of al Activation Studies on the Prevention of ausal Women al Counter MRC MRC	2 1 1 5 Award OPR OPR	\$ \$ \$ \$ \$ \$	83,321 4,320 30,277 500,918 <i>Amount</i> 60,263 37,315 97,578	MRC MRC

Investigator	Project Title	Award		Amount	Agency
Bridger, W A					
Heart Mitochondrial	Protein Transport	OPR	\$. 38,900	CHF
Enzyme Structure a	·	OPR	\$	108,350	MRC
Brox, L W	,		•	, , , , , ,	
	Henderson, J F (J S McEachern Laboratory): Purine Nucleoside and				
Nucleotide					
Cass, C E	Determined A D D (10 Ma) Francis Laborator () Transport of				
Co-investigator with Nucleosides	Paterson, ARP (JS McEachern Laboratory): Transport of				
Colter, J S					
	Support of Medical Research in the Laboratory of J S Colter	OPR	\$	30,000	AHFMR
Investigations of Ce	• • • • • • • • • • • • • • • • • • • •	OPR	\$	18,780	MRC
Hodges, R S	in-virus interactions	Orti	Ψ	10,700	WII IO
	g Alberta Pharmaceuticals for the Production, Formulation &	TTR	\$	30,000	AHFMR
	thetic Peptides & Related Products		Ť	,	
Regulation of Cardi	ac Muscle Contraction	OPR	\$	34,000	CHF
•	guipment Grant for Alberta Peptide Institute	OPR	\$	82,750	MRC
	Kay, C M: Group in Protein Structure and	•	•	,	
Peptide Vaccine De	·	CTR	\$	10,530	UT
James, M N G	anvery	OIII	Ψ	10,550	01
	Kay, C M: Group in Protein Structure and				
Kaplan, J G	, , , , , , , , , , , , , , , , , , ,				
	tochemical Analysis of Nuclear Activation in Stimulated Lymphocytes	OPR	\$	79,425	MRC
Mechanism of the F	Proliferative Activation of Lymphocytes	OPR	\$	53,472	NSERC
Kay, C M	• • •				
Physico-Chemical,	Chemical and Biological Studies on Cardiac Troponin C and Troponin T	OPR	\$	30,000	CHF
Group in Protein Str	ructure and Function	OPR	\$	1,401,362	MRC
Madsen, N B					
	Relationships and Regulation of Enzymes Associated with Glycogen	OPR	\$	147,750	MRC
Metabolism					
McElhaney, R N	in Biomembrane Structure and Function	OPR	\$	106,498	MRC
McFadden, G	in biomembrane structure and runction	OFT	Ψ	100,430	WITTO
	th Factor Activities in Poxvirus-infected Cells	OPR	\$	44,563	ACB
_	solution of Cloned Poxivirus Telomeres	OPR	\$	36,750	MRC
Replication of Poxvi		OPR	\$	11,672	MRC
Shope Fibroma Viru	,	OPR	\$	49,392	NCI
Morgan, A R		OFN	Ψ	45,352	NOI
DNA Repair		OPR	\$	32,539	ACB
•	ecombination, Repair	OPR	\$	60,578	MRC
Paetkau, V H	ocomomation, respair	0,	Ψ	00,070	
Cancer Immunothe	rapy	OPR	\$	81,540	ACB
	ession of Genome DNA	OPR	\$	82,491	MRC
Terry Fox Special In		OPR	\$	35,379	NCI
Modulators of Lymp	· ·	OPR	\$	87,625	NCI
Paranchych, W		51.11	Ψ	57,025	1101
	eudomonas aeruginosa Infection in Patients with Cystic Fibrosis	OPR	\$	4,000	BCHC
Characterization of	Conserved and Variable Peptide Domains on the Surface of	OPR	\$	19,950	CCFF
	Potential for Therapeutic Strategiesin Patients with Cystic Fibrosis		•	,	
	mbly, Structure and Function of Bacterial Pili	OPR	\$	125,537	MRC
Paterson, A R P		-	•	,	_
	Henderson, J F (J S McEachern Laboratory): Inhibitors of Nucleoside				
Transport					
Reithmeier, R A		0.55			0.15
	tion of the Anion Transport Protein from Human Erythrocyte Membranes	OPR	\$	30,000	CHF
	tion of the Anion Transport Protein from Human Erythrocyte Membranes	OPR	\$	50,235	MRC
Schneider, W J	Fodos desir in Ossukas	000	_	E0 000	A11C14D
•	Endocytosis in Oocytes	OPR	\$	52,900	AHFMR
Hormonal Control o		OPR	\$	40,000	CHF
	Endocytosis in Oocytes	OPR	\$	49,250	MRC
Scraba, D G	DUT EM 400 OTEM EL : AT		_		1450
	r Philips EM 420-STEM Electron Microscope	OPR	\$	9,988	MRC
	malian Viruses (2) Biological Electron Microscopy	OPR	\$	75,845	MRC
Smillie, L B	May C.M. Craye in Brotain Characteria and				
Co-investigator with	n Kay, C M: Group in Protein Structure and				

Investigato	or	Project	Title			Award		Amount	Agency
Sykes, B	D								
Co	-investigator with Kay, C	M: Group i	n Pr	otein Structure ai	nd				
ance, D		·							
Tra	ansfer of Funds from Un	iversity of Br	ritish	Columbia - Prize	e for a Paper Submitted to the	OPR	\$	3,050	BM
198	85 Meeting of the Canad	dian Lipopro	tein	Conference					
Veiner, J									
An	Investigation of Membra	ane Transpo	rt P	rocesses		OPR	\$	84,304	MRC
Ту	pe of Award	No.		Amount	Source of Funds	No.		Amount	
Co	ntracts	2	\$	30,030	AHFMR	3	\$	112,900	
Op	erating	35	\$	3,286,350	MRC	17	\$	2,531,565	
Te	chnology Transfer	1	\$	30,000	NSERC	1	\$	53,472	
To		38	\$	3,346,380	Other Provincial	3	\$	158,642	
			•		Other Agencies	14	\$	489,801	
					Total	38	<u>,</u>	3.346.380	

Cross Cancer Institute

The Cross Cancer Institute is an independent organization and has a formal affliation with the Faculty of Medicine. The Alberta Cancer Board administers research funds for the Cross Cancer Institute directly. All principal investigators at the Cross Cancer Institute also hold academic appointments with the University of Alberta. Operating awards administered directly by the Institute include:

ACB \$1,104,789; NCI \$336,951; AHMFR \$669,768; MRC \$37,372; private contracts and other institutions \$671,371; total \$2,820,251.

This total is not included in the University of Alberta total given at the beginning of this document. Research support is reported within the University's departments when awards are administered by the University.

Group Lipid and Lipoprotein

nvestigator	Project Titl	e		Award		Amount	Agency
/ance, D E Lipid-Lipoprotein Grou	up- Phospholipid and	d Lipoprotein N	M etabolism	OPR	\$	554,560	AHFMR
Ope rating			AHFMR	1	\$	554,560	
aroup NMR							
nvestigator	stigator Project Title						
Routine Operation and Maintenance of in vivo Animal NMR Facility Co-investigator with Boisvert, D P J (Surgery and Clinical Surgery): In-vivo Nuclear Magnetic Resonance						33,273	ACB
Clinical Applications o	f in vivo NMR to Ca	ncer Research	1	OPR	\$	72,500	ACB
In vivo Applications of				OPR	\$	123,304	ACB
In vivo Applications of		Resonance to	Medicine	OPR	\$	52,889	MRC
Data Storage Disk for	in vivo NMR Facility	/		EQP	\$	34,755	MRC
Co-investigator with V Chronic	Veir, B (Surgery and	Clinical Surge	ery): Studies on the Prevention of				
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Equipment	1 \$		MRC	2	\$	87,644	
Operating	4 \$		Other Provincial Total	3 5	\$ \$	229,077 316 721	
Total	5 \$	316,721	rotai	5	Ф	316,721	

Guidotti, T L	Project Title			Award		Amount	Agency
				ODD	Φ.	55 400	40011
Illness Experience of Fir	-			OPR	\$	55,400	ACOH
Symposium on Immuno				CFC	\$	9,500	ACOH
Sponsorship with the Ca			pational Medicine Under Joint	CTR	\$	3,500	OMAC
Sponsorship with the Ca	anadian board of Oc	cupational Meu	icine				
Survey of Canadian Hos	spital Administrators	: Correlates of t	he Role Identity of an	OPR	\$	4,585	AFNR
Organizational Profession			·				
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	9,500	Other Provincial	3	\$	69,485	
Contracts	1 \$	3,500	Other Agencies	1	\$	3,500	
Operating Total	2 \$ 4 \$	59,985 72,985	Total	4	\$	72,985	
	• •	,					
Department of Immuno nvestigator	logy Project Title			Award		Amount	Agenc
iener, E							
			ated Purging of Lymphoma Cells	CTR	\$	75,140	BIOM
MRC Group on Immuno	oregulation			OPR	\$	627,027	MRC
otedar, A				OPR	\$	84,000	AHFM
					JD .	04,000	AULIN
T Cell Recognition						20.762	
T Cell Recognition				OPR	\$	30,763	MRC
T Cell Recognition Green, D R	ells & Molecules						MRC
T Cell Recognition ireen, D R Immunoregulatory T Ce	ells & Molecules			OPR OPR	\$	30,763 86,150	MRC AHFM
T Cell Recognition ireen, D R Immunoregulatory T Ce				OPR OPR OPR	\$ \$ \$	86,150 56,999	MRC AHFM ACB
T Cell Recognition Green, D R Immunoregulatory T Ce .ee, K C Macrophage-Tumor Inte Functions of Dendritic C	eractions	ges in Immune Ir	nduction	OPR OPR	\$	86,150	MRC AHFM
T Cell Recognition Areen, D R Immunoregulatory T Celee, K C Macrophage-Tumor Integrations of Dendritic Co.ongenecker, B M	eractions Cells and Macrophag			OPR OPR OPR OPR	\$ \$	86,150 56,999 59,578	MRC AHFM ACB NCI
T Cell Recognition Areen, D R Immunoregulatory T Ce Lee, K C Macrophage-Tumor Inte Functions of Dendritic Co. Longenecker, B M Human Monoclonal Ant	eractions Cells and Macrophaç tibodies and Cancer	Associated Anti	gens: Antibody Production,	OPR OPR OPR	\$ \$ \$	86,150 56,999	MRC AHFM ACB
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Congenecker, B M Human Monoclonal Ant Analysis of B Cell Differ	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter	Associated Antinitiation of Antibo	gens: Antibody Production,	OPR OPR OPR OPR	\$ \$	86,150 56,999 59,578	MRC AHFM ACB NCI
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Congenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur	Associated Antinitiation of Antibo	gens: Antibody Production, dy Formation	OPR OPR OPR OPR	\$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675	MRC AHFM ACB NCI ACB ACB
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Congenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur falignancy and Differ	Associated Antinitation of Antibonan Cancer usin	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and	OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675 59,100	MRC AHFM ACB NCI ACB ACB
T Cell Recognition Green, D R Immunoregulatory T Celee, K C Macrophage-Tumor Interpretations of Dendritic Congenecker, B M Human Monoclonal Anterpretations of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M Mechanisms of Organ S	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur falignancy and Differ	Associated Antinitation of Antibonan Cancer usin	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and	OPR OPR OPR OPR	\$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675	MRC AHFM ACB NCI ACB
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Co ongenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M Mechanisms of Organ S illarski, L M	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur falignancy and Differ Specific Metastasis,	Associated Antinitation of Antibo man Cancer using rentiation Terry Fox Speci	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and ial Initiatives Program	OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675 59,100 91,766	MRC AHFM ACB NCI ACB ACB MRC NCI
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Co ongenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M Mechanisms of Organ S Pilarski, L M Analysis of the Immune	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur falignancy and Differ Specific Metastasis, e Response of Multip	Associated Antinitiation of Antibornan Cancer using rentiation Terry Fox Speciale Myeloma Pat	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and	OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675 59,100 91,766 79,353	MRC AHFM ACB NCI ACB ACB MRC NCI ACB
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Co. ongenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M Mechanisms of Organ S ilarski, L M Analysis of the Immune Analysis of Help in Cyto	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur Malignancy and Differ Specific Metastasis, e Response of Multip otoxic T Cell Respon	Associated Antinitiation of Antibornan Cancer using rentiation Terry Fox Speciale Myeloma Patases	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and ial Initiatives Program	OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675 59,100 91,766 79,353 86,298	MRC AHFM ACB NCI ACB MRC NCI ACB
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Co. ongenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M Mechanisms of Organ S illarski, L M Analysis of the Immune Analysis of Immunodefi	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur Malignancy and Differ Specific Metastasis, e Response of Multip otoxic T Cell Respon	Associated Antinitiation of Antibornan Cancer using rentiation Terry Fox Speciale Myeloma Patases	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and ial Initiatives Program	OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675 59,100 91,766 79,353	MRC AHFM ACB NCI ACB MRC NCI ACB
T Cell Recognition ireen, D R Immunoregulatory T Ce ee, K C Macrophage-Tumor Inte Functions of Dendritic Co. ongenecker, B M Human Monoclonal Ant Analysis of B Cell Differ Radioimmunoimaging a Lectins Molecular Markers of M Mechanisms of Organ S ilarski, L M Analysis of the Immune Analysis of Help in Cyto	eractions Cells and Macrophag tibodies and Cancer rentiation, and Poter and Detection of Hur Malignancy and Differ Specific Metastasis, e Response of Multip toxic T Cell Respor iciency in Multiple M	Associated Antinitiation of Antibornan Cancer using rentiation Terry Fox Speciale Myeloma Patases yeloma	gens: Antibody Production, dy Formation ng Monoclonal Antibodies and ial Initiatives Program ients to Antologous Paraprotein	OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$	86,150 56,999 59,578 80,138 186,675 59,100 91,766 79,353 86,298	MRC AHFM ACB NCI ACB MRC NCI ACB MRC

Type of Award	No.	Amount	Source of Funds	No.		Amount
Contracts	1	\$ 75,140	AHFMR	2	_ _ \$	170,150
Operating	14	\$ 1,631,962	MRC	4	\$	803,188
Total	15	\$ 1,707,102	Other Provincial	4	\$	403,165
		, ,	Other Agencies	5	\$	330,599
			Total	15	\$	1.707.102

J S McEachern Lab	oratory
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stit, W P Co-investigator with Paterson, A F P: Interactions of Nucleoside Transport	vestigator	Project	Title			Award		Amount	Agency
enderson, J.F. EQP \$ 30,950 ACB Inhibitors of Nucleoside Transport as Modulators of Nucleoside Metabolism in-vivo and Inhibitors of Nucleoside and Nucleotide Metabolism OPR \$ 40,552 ACB Inhibitors of Nucleoside Transport as Modulators of Nucleoside Metabolism in-vivo OPR \$ 43,202 MRC Agreson, A.P. Planteractions of Nucleoside Transport Inhibitors with Tumor Cell Membranes: Fundamental Mechanisms and Therapeutic Applications OPR \$ 45,156 ACB Co-investigator with Tyrrell, D.L. (Medical Microbiology and Infectious Diseases): Hepatitis B Antiviral Fiesearch OPR \$ 87,409 MRC Type of Award No. Amount Source of Funds No. Amount Equipment 1 \$ 30,950 MRC 2 \$ 130,611 Set,419 NCI Operating 5 871,138 Other Provincial 3 \$ 116,658 Set,419 NCI Amount Amount Amount Amount Agency Amount Agency Amount Agency Amount Agency Amount Agency NRC The Call of the									
Liquid Scintillation Counter		th Paterson, A R P:	ntera	ctions of Nucleo	side Fransport				
Inhibitors of Nucleoside Transport as Modulators of Nucleoside Metabolism in-vitro Purine Nucleoside and Nucleotide Metabolism Purine Nucleoside and Nucleotide Metabolism Purine Nucleoside and Nucleotide Metabolism OPR \$ 43,202 MRC deterson, A FP Interactions of Nucleoside Transport Inhibitors with Tumor Cell Membranes: Fundamental Mechanisms and Therapeutic Applications Co-investigator with Tyrrell, D L (Medical Microbiology and Infectious Diseases): Hepatitis B Antiviral Research Antiviral Research Performs of Nucleosides Studies in Cancer Chemotherapy Type of Award No. Amount Source of Funds No. Amount Source of Funds No. Amount Equipment 1 \$ 30,950 MRC QPR \$ 43,409 MRC POPR \$ 654,819 NCI Type of Award No. Amount Source of Funds No. Amount Equipment 1 \$ 30,950 MRC QPR \$ 130,611 QPR \$ 130,611 QPR \$ 130,611 QPR \$ 654,819 Total QPR \$ 902,088 Department of Medical Microbiology and Infectious Diseases Nestigator Project Title No. Amount Reproses Nestigator Project Title No. Amount Reproses Nestigator Project Title No. Amount Reproses Nestigator Project Title No. Amount No		Counter				FOP	\$	30 950	ACB
In-vitro Purine Nucleoside and Nucleotide Metabolism Purine Nucleoside Transport Inhibitors with Tumor Cell Membranes: Fundamental OPR \$ 43,202 MRC alterson, A R P Interactions of Nucleoside Transport Inhibitors with Tumor Cell Membranes: Fundamental OPR \$ 45,156 ACB Mechanisms and Therapeutic Applications Co-investigator with Tyrrell, D L (Medical Microbiology and Infectious Diseases): Hepatitis B Antiviral Research Transport of Nucleosides OPPR \$ 37,409 MRC Studies in Cancer Chemotherapy OPPR \$ 654,819 NCI Type of Award No. Amount Source of Funds No. Amount Equipment 1 \$ 30,950 MRC 2 \$ 130,611 OPPR \$ 11,0851 OPPR \$ 11,085			/lodul	ators of Nucleos	side Metabolism in-vivo and				· -
aterson, A R P Interactions of Nucleoside Transport Inhibitors with Tumor Cell Membranes: Fundamental Mechanisms and Therapeutic Applications ACB Mechanisms and Therapeutic Applications Co-investigator with Tyrrell, D L (Medical Microbiology and Infectious Diseases): Hepatitis B Antiviral Research		oolde Transport as h	noduli	21013 01 14001000	ide Metabolisiii iii vivo alia	0111	Ψ	40,002	AOD
aterson, A R P Interactions of Nucleoside Transport Inhibitors with Tumor Cell Membranes: Fundamental Mechanisms and Therapeutic Applications ACB Mechanisms and Therapeutic Applications Co-investigator with Tyrrell, D L (Medical Microbiology and Infectious Diseases): Hepatitis B Antiviral Research		and Nucleotide Met	abolis	sm		OPR	\$	43,202	MRC
Mechanisms and Therapeutic Applications Co-investigator with Tyrell, D L (Medical Microbiology and Infectious Diseases): Hepatitis B Antiviral Research Transport of Nucleosides Studies in Cancer Chemotherapy Surges in Cancer Chemotherapy Provincial Type of Award No. Amount Equipment 1 \$ 30,950 MRC 2 \$ 130,611 Operating 5 \$ 871,138 Other Provincial 3 \$ 116,658 Total Operating 5 \$ 902,088 Other Agencies Total Operating 7 Project Title New Stigator Project Title Award Amount Bischemical Characterization of Intestinal Epithelial Cell Receptors for Human Enterotoxigenic Escherichia coli Obertson, J A Characterization of Ureaplasma urealyticum Characterization of Ureaplasma urealyticum Department of G+C Tatios and DNA Homology Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Determination of G+C Tatios and DNA Homology Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Determination of G+C Tatios and DNA Homology C-C-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents Hepatitis B Antiviral Research Neurovirological Research Neuroviro									
Antiviral Research	Mechanisms and	Mechanisms and Therapeutic Applications							ACB
Studies in Cancer Chemotherapy	Antiviral Research	1	cal Mi	crobiology and f	nfectious Diseases): Hepatitis B				
Type of Award No. Amount Source of Funds No. Amount	Transport of Nucle	eosides				OPR	\$	87,409	MRC
Equipment	Studies in Cancer	Chemotherapy				OPR	\$	654,819	NCI
Departing 5	Type of Award	No.		Amount	Source of Funds	No.		Amount	
Departing 5	Equipment	1	\$	30,950	MRC	2	\$	130.611	
Pepartment of Medical Microbiology and Infectious Diseases Westigator Project Title Award Amount Agency Imstrong, G D Biochemical Characterization of Intestinal Epithelial Cell Receptors for Human Enterotoxigenic Escherichia coli Nobertson, J A Characterization of Ureaplasma urealyticum Characterization of Ureaplasma urealyticum Immunopathogenesis of Neurovirological Diseases Aylor, D E Determination of G+C Tatios and DNA Homology Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Incompatibility Group Agency Arrivitral Agents	Operating	5	\$				\$	116,658	
Department of Medical Microbiology and Infectious Diseases Investigator Project Title Award Amount Agency Umstrong, G D Biochemical Characterization of Intestinal Epithelial Cell Receptors for Human Enterotoxigenic Escherichia coli Interotoxigenic Escherichia coli Iobertson, J A Characterization of Ureaplasma urealyticum Characterization of Ureaplasma urealyticum Immunopathogenesis of Neurovirological Diseases April Determination of G+C Tatios and DNA Homology Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Incompatibility Group Yerrell, D L Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents	Total	6	\$	902,088					
Imstrong, G D Blochemical Characterization of Intestinal Epithelial Cell Receptors for Human OPR \$ 36,190 MRC					Total	6	\$	902,088	
Investigator									
Imstrong, G D Biochemical Characterization of Intestinal Epithelial Cell Receptors for Human Enterotoxigenic Escherichia coli Interotoxigenic Escherichia coli	-			nd Infectiou	s Diseases				
Biochemical Characterization of Intestinal Epithelial Cell Receptors for Human Enterotoxigenic Escherichia coli lobertson, J A Characterization of Ureaplasma urealyticum OPR \$ 54,714 MRC lmmunopathogenesis of Neurovirological Diseases OPR \$ 119,445 AHFMR aylor, D E OPR \$ 119,445 AHFMR aylor, D E OPR \$ 119,445 AHFMR aylor, D E OPR \$ 47,834 MRC Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H OPR \$ 47,834 MRC Incompatibility Group yrrell, D L Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents	nvestigator	Project	Title			Award		Amount	Agency
Immunopathogenesis of Neurovirological Diseases Determination of G+C Tatios and DNA Homology Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Incompatibility Group yrrell, D L Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents Hepatitis B Antiviral Research Development of DNA Probes Neurovirological Research OPR \$ 5,000 ORTHO OPR \$ 60,709 PENN Neurovirological Research OPR \$ 685 PFIZ Type of Award No. Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 OPR \$ 212,667 Total 13 \$ 568,531 Other Federal 1 \$ 2,000 Other Agencies 7 \$ 234,419									
Determination of G+C Tatios and DNA Homology Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Incompatibility Group yrrell, D L Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents Hepatitis B Antiviral Research Development of DNA Probes Neurovirological Research Neurovirological Research Paramyxoviruses, Assembly, Persistence and Autoimmunity Neurovirological Research Neu	Biochemical Chara Enterotoxigenic Es obertson, J A Characterization of	scherichia coli	·		ceptors for Human				
Genetic and Physical Characterization of Antibiotic Resistance Plasmids of the H Incompatibility Group yrrell, D L Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents Hepatitis B Antiviral Research Development of DNA Probes Neurovirological Research OPR \$ 5,000 ORTHO Neurovirological Research OPR \$ 60,709 PENN Neurovirological Research OPR \$ 685 PFIZ Type of Award No. Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total Other Federal Other Federal Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Estobertson, J A Characterization calmi, A A Immunopathogene	scherichia coli of Ureaplasma urealy	ticum		ceptors for Human	OPR	\$	54,714	MRC
Incompatibility Group yrrell, D L Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents Hepatitis B Antiviral Research Development of DNA Probes Neurovirological Research Neurovirological Research Neurovirological Research Paramyxoviruses, Assembly, Persistence and Autoimmunity Neurovirological Research OPR \$ 5,000 ORTHO Neurovirological Research OPR \$ 60,709 PENN Neurovirological Research OPR \$ 685 PFIZ Type of Award No. Amount Contracts 3 \$ 156,024 AHFMR AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total Total Other Federal Other Federal Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Estables of A Characterization of A Almi, A A Immunopathogenerallor, D E	scherichia coli of Ureaplasma urealy esis of Neurovirologi	ticum	seases	ceptors for Human	OPR OPR	\$ \$	54,714 119,445	MRC AHFMR
Co-investigator with Micetich, R G (Pharmacy and Pharmaceutical Sciences): Novel Anti-Viral Agents Hepatitis B Antiviral Research Development of DNA Probes Neurovirological Research Neurovirological Research Paramyxoviruses, Assembly, Persistence and Autoimmunity Neurovirological Research Noner Source of Funds No. Amount Type of Award No. Amount Source of Funds No. Amount AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Establishmentson, J A Characterization calmi, A A Immunopathogeneaylor, D E Determination of C	scherichia coli of Ureaplasma urealy esis of Neurovirologi G+C Tatios and DNA	ticum cal Dis	seases ology		OPR OPR CTR	\$ \$	54,714 119,445 2,000	MRC AHFMR HWC
Development of DNA Probes CTR \$ 40,794 CHEM	Biochemical Chara Enterotoxigenic Estabertson, J A Characterization calmi, A A Immunopathogeneaylor, D E Determination of Canetic and Phys Incompatibility Gro	scherichia coli of Ureaplasma urealy esis of Neurovirologi G+C Tatios and DNA ical Characterization	ticum cal Dis	seases ology		OPR OPR CTR	\$ \$	54,714 119,445 2,000	MRC AHFMR HWC
Development of DNA Probes CTR \$ 40,794 CHEM	Biochemical Chara Enterotoxigenic Establetan, J A Characterization calmi, A A Immunopathogene aylor, D E Determination of Canetic and Phys Incompatibility Gro yrrell, D L Co-investigator wi	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph	ticum cal Dis Homore	seases ology tibiotic Resistar	nce Plasmids of the H	OPR OPR CTR	\$ \$	54,714 119,445 2,000	MRC AHFMR HWC
Neurovirological Research OPR \$ 10,000 CHEM Neurovirological Research OPR \$ 4,000 EGH Paramyxoviruses, Assembly, Persistence and Autoimmunity OPR \$ 73,929 MRC Neurovirological Research OPR \$ 5,000 ORTHO Neurovirological Research OPR \$ 60,709 PENN Neurovirological Research OPR \$ 685 PFIZ Type of Award No. Amount Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal 1 \$ 2,000 Other Agencies 7 \$ 234,419 3 34,419	Biochemical Chara Enterotoxigenic Est obertson, J A Characterization of almi, A A Immunopathogene aylor, D E Determination of C Genetic and Phys Incompatibility Gro yrrell, D L Co-investigator wi Anti-Viral Agents.	scherichia coli of Ureaplasma urealy esis of Neurovirologi G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph	ticum cal Dis Homore	seases ology tibiotic Resistar	nce Plasmids of the H	OPR OPR CTR OPR	\$ \$ \$	54,714 119,445 2,000 47,834	MRC AHFMR HWC MRC
Neurovirological Research OPR \$ 4,000 EGH	Biochemical Chara- Enterotoxigenic E: obertson, J A Characterization calmi, A A Immunopathogene aylor, D E Determination of Canada and Phys Incompatibility Gro yrrell, D L Co-investigator wi Anti-Viral Agents Hepatitis B Antivir	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research	ticum cal Dis Homore	seases ology tibiotic Resistar	nce Plasmids of the H	OPR OPR CTR OPR	\$ \$ \$ \$	54,714 119,445 2,000 47,834	MRC AHFMR HWC MRC
Paramyxoviruses, Assembly, Persistence and Autoimmunity OPR \$ 73,929 MRC MRC Neurovirological Research OPR \$ 5,000 ORTHO OPR \$ 60,709 PENN Neurovirological Research OPR \$ 685 PFIZ PFIZ Type of Award No. Amount Amount Amount Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 AMOUNT Total 1 \$ 2,000 Total 13 \$ 568,531 Other Federal Other Agencies 7 \$ 234,419 234,419	Biochemical Chara Enterotoxigenic Ei obertson, J A Characterization of almi, A A Immunopathogene aylor, D E Determination of C Genetic and Phys Incompatibility Gro yrrell, D L Co-investigator wi Anti-Viral Agents Hepatitis B Antivir Development of D	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research iNA Probes	ticum cal Dis Homore	seases ology tibiotic Resistar	nce Plasmids of the H	OPR OPR CTR OPR CTR CTR	\$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794	MRC AHFMR HWC MRC BIOM CHEM
Neurovirological Research OPR \$ 5,000 ORTHO Neurovirological Research OPR \$ 60,709 PENN Neurovirological Research OPR \$ 685 PFIZ Type of Award No. Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Est obertson, J A Characterization of almi, A A Immunopathogener aylor, D E Determination of C Genetic and Phys Incompatibility Gro yrrell, D L Co-investigator wi Anti-Viral Agents . Hepatitis B Antivir Development of D Neurovirological F	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research NA Probes Research	ticum cal Dis Homore	seases ology tibiotic Resistar	nce Plasmids of the H	OPR OPR CTR OPR CTR CTR CTR OPR	\$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000	MRC AHFMR HWC MRC BIOM CHEM CHEM
Neurovirological Research Neurovirological Research OPR \$ 60,709 PENN 685 PFIZ Type of Award No. Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 Degrating 10 \$ 412,507 MRC Amount 4 \$ 212,667 Total 13 \$ 568,531 Degrating Other Federal Degrations Other Federal Degrations 1 \$ 2,000 Degrating 7 \$ 234,419	Biochemical Chara Enterotoxigenic Esterotoxigenic Esterotoxiganic Esterotoxigenic Esterotoxigenic Esterotoxigenic Esterotoxiganic Esterotoxigenic Esterotoxigenic Esterotoxigenic Esterotoxiganic Esterotoxigenic Esterotoxiganic Esterotoxiga	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research NA Probes Research	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac	nce Plasmids of the H reutical Sciences): Novel	OPR OPR CTR OPR CTR CTR CTR OPR OPR	* * * * * * * * *	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH
Type of Award No. Amount Source of Funds No. Amount Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Esterotoxigenic Esterotoxiganic Esterotoxigenic Esterotoxigenic Esterotoxigenic Esterotoxiganic Esterotoxigenic Esterotoxigenic Esterotoxigenic Esterotoxiganic Esterotoxiga	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research iNA Probes Research Research Assembly, Persister	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac	nce Plasmids of the H reutical Sciences): Novel	OPR OPR CTR OPR CTR CTR CTR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC
Contracts 3 \$ 156,024 AHFMR 1 \$ 119,445 Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal 1 \$ 2,000 Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Est Characterization of almi, A A Immunopathogene Bylor, D E Determination of C Genetic and Phys Incompatibility Gro Yrrell, D L Co-investigator wi Anti-Viral Agents Hepatitis B Antivir Development of D Neurovirological F Neurovirological F Paramyxoviruses, Neurovirological F	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph.) al Research NA Probes Research Research Assembly, Persister Research	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac	nce Plasmids of the H reutical Sciences): Novel	OPR OPR CTR OPR CTR CTR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929 5,000	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC ORTHO
Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal 1 \$ 2,000 Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Est Independent of A Characterization of A Immunopathogene Aylor, D E Determination of C Genetic and Phys Incompatibility Gro Incompatib	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph.) al Research NA Probes Research Research Assembly, Persister Research Research	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac	nce Plasmids of the H reutical Sciences): Novel	OPR OPR CTR OPR CTR OPR OPR OPR OPR	\$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929 5,000 60,709	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC ORTHO PENN
Operating 10 \$ 412,507 MRC 4 \$ 212,667 Total 13 \$ 568,531 Other Federal 1 \$ 2,000 Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Est Bobertson, J A Characterization of almi, A A Immunopathogene Botermination of Compatibility Ground in Compatibil	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research NA Probes Research Research Research Research Research Research Research Research	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac	nce Plasmids of the H reutical Sciences): Novel	OPR OPR CTR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929 5,000 60,709 685	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC ORTHO PENN
Total 13 \$ 568,531 Other Federal 1 \$ 2,000 Other Agencies 7 \$ 234,419	Biochemical Chara Enterotoxigenic Estaterotoxigenic Estaterotoxige	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research NA Probes Research	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac and Autoimmunity	nce Plasmids of the H reutical Sciences): Novel	OPR OPR CTR OPR OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$\$ \$\$\$\$\$\$\$\$\$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929 5,000 60,709 685 Amount	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC ORTHO PENN
	Biochemical Chara Enterotoxigenic Enterotoxigation Enterotoxigenic Enterotoxigenic Enterotoxigenic Enterotoxigation Enterotoxigenic Enterotoxi	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research NA Probes Research	ticum cal Dis Hom of An	seases ology tibiotic Resistar by and Pharmac and Autoimmunity Amount 156,024 412,507	nce Plasmids of the H seutical Sciences): Novel Source of Funds AHFMR MRC	OPR OPR CTR OPR CTR OPR OPR OPR OPR OPR OPR OPR 1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929 5,000 60,709 685 Amount 119,445	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC ORTHO PENN
	Biochemical Chara Enterotoxigenic Enterotoxigation Enterotoxigenic Enterotoxigenic Enterotoxigenic Enterotoxigation Enterotoxigenic Enterotoxi	scherichia coli of Ureaplasma urealy esis of Neurovirologic G+C Tatios and DNA ical Characterization oup th Micetich, R G (Ph al Research NA Probes Research	ticum cal Dis Hom of An armac	seases ology tibiotic Resistar by and Pharmac and Autoimmunity Amount 156,024 412,507	nce Plasmids of the H seutical Sciences): Novel Source of Funds AHFMR MRC Other Federal	OPR OPR CTR OPR CTR OPR OPR OPR OPR OPR OPR 1 4 1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	54,714 119,445 2,000 47,834 113,230 40,794 10,000 4,000 73,929 5,000 60,709 685 Amount 119,445 212,667 2,000	MRC AHFMR HWC MRC BIOM CHEM CHEM EGH MRC ORTHO PENN

Department of Medicine and Clinical Medicine	Award		Amount	Aganav
Investigator Project Title	Award		Amount	Agency
Bretscher, P A Antigen-Specific Regulation and Modulation of the Immune Response. Previous title: Paralysis and Induction of Lymphocytes	OPR	\$	76,944	MRC
Clandinin, M T In Support of Seminar and Research Related Activities of the Nutrition and Metabolism Research Group	OPR	\$	750	HEINZ
Essential Fatty Acid Chain Elongation - Desaturation during Neonatal Development	OPR	\$	36,445	MRC
Dasgupta, M K Role of Biofilm Adherent Bacterial Colonization of Tenckhoff Catheters in Peritonitis Associated with CAPD	OPR	\$	14,000	KFC
Co-investigator with Dossetor, J B: Cooperative Research and Development				
Davis, P The Mechanism of Action of Gold Compounds in Rheumatoid Arthritis	OPR	\$	38,000	AS
Dossetor, J B Cooperative Research and Development Grant - Development of Urine Collection and Peritoneal Dialysis System that Resist Bacterial Colonization and Reduce Catheter-associated Infections Fedorak, R N	OPR	\$	14,000	NSERC
Adaptation & Regulation of Intestinal Glucose Transport	OPR	\$	187,131	AHFMR
Finegood, D T Hepatic Insulin Action and Insulin Resistance	OPR	\$	134,328	AHFMR
Grace, M G	OFN	Φ	134,320	AULINIU
Co-investigator with Pabst, H F (Paediatrics): Hemophilus Influenzae b (Hib) Vaccination Co-investigator with Overton, T R (Applied Sciences in Medicine): A Clinical Trial of Skeletal Activation				
Harley, C H				
Co-investigator with Overton, T R (Applied Sciences in Medicine): A Clinical Trial of Skeletal Activation Hulbert, W				
To Provide Monitoring Equipment	INF	\$	132,835	AHFMR
Jugdutt, B I Two-Dimensional Echocardiography & Doppler	OPR	\$	143,000	AHFMR
Prolonged Nitroglycerin Therapy in Acute Myocardial Infarction: Effect on Shape Distortion and Infarct Expansion	OPR	\$	50,000	CHF
Modification of Ventricular Geometry and Function after Myocardial Infarction Ischemic Heart Disease: Preservation of Ischemic Myocardium/Healing after Myocardial Infarction	OPR OPR	\$ \$	18,000 49,476	CHF MRC
Kappagoda, C T				
Co-investigator with Mant, M J: Platelet Activation/Reactivity	000	•	00.007	1450
Function of Atrial Receptors Kaufman, S	OPR	\$	36,997	MRC
Cardiac Control of Fluid and Electrolyte Balance	OPR	\$	35,000	CHF
Mechanisms by which Atrial Stretch Contributes to Fluid and Electrolyte Homeostasis	OPR	\$	38,465	MRC
Inappropriate Drinking - A Study of Pathological Thirst and Fluid Retention King, E G	OPR	\$	8,838	MRC
Co-investigator with Tulip, J (Engineering, Electrical Engineering): Medical Laser Facility King, M				
Studies on Mucus Clearance	OPR	\$	62,400	AHFMR
Mucus Clearance by Airflow Interaction	OPR	\$	26,097	CCFF
Studies on Respiratory Tract Mucus	OPR	\$	40,603	MRC
Kovithavongs, T T4 CTL and T8 CTL in Renal Allograft Rejection	OPR	\$	29,989	KFC
Leung, W C			,	
Expression and Protein Engineering of Viral Neutralization Antigens	OPR	\$	10,200	MRC
Protein Engineering of Human Interferon Gamma Mahachai, V	OPR	\$	51,750	NCI
Factors Influencing Intestinal & Hepatic First-Pass Metabolism of Drugs Man, G C W	OPR	\$	184,535	AHFMR
Studies on Reflex Changes in Bronchomotor Tone During High Frequency Oscillation	OPR	\$	28,565	MRC

nvestigator	Project	Title			Award		Amount	Agency
Man, S F P								
	ing Function in Inhala	ation	al Injury		OPR	\$	45,901	MRC
Co-investigator wi Amines as Potenti	th Noujaim, A A (Pha ial Radiopharmaceuti	ırma icals	cy and Pharmace	eutical Sciences): Aliphatic		·	,	
	nning in Interstitial Lu				OPR	\$	34,000	MSI
	ch Expenses in Labor	_			OPR	\$	2,000	TWH
lant, M J	/D		le de Bran		000	•		
lcBlain, W A	/Reactivity in Cardiov				OPR	\$	50,385	MRC
Identification of Fu I olnar, G D	ınctional Steroid Rec	epto	rs in Human Mar	mmary and Prostatic Cancer	OPR	\$	40,818	ACB
Immunology of Dia I oreau, M J	abetes to be held in E	Edmo	onton, Alberta Ju	ne 26-28/86	CFC	\$	15,000	AHFMR
Experimental Evai	luation of Spinal Fixa	tion	Devices		OPR	\$	23,640	MRC
	ental Growth, Differe	ntiat	tion and Peptide	Hormone Secretion	OPR	\$	43,340	MRC
Monoclonal Gamn	nopathies in Cyclosp of Herpesvirus Infecti	orine ons	Treated Renal A	Allograft Recipients - Natural	OPR	\$	20,000	CIDS
	Lymphoproliferation	in R	enal Allograft Re	cipients	OPR	\$	15,000	KFC
ussell, A S Co-investigator wi Pharmacokinetics		су а	nd Pharmaceutic	eal Sciences): Stereoselective				
A Longitudinal Stu Pregnant Subjects	dy of Non-Specific In	nmu	ne and Inflamma	tory Responses in Normal	OPR	\$	16,680	MSI
homson, A B R		!			000	•	45.040	
=	es in the Irradiated In				OPR	\$	45,340	ACB
Critical Period Pro	ne Transport in Diabo	eles	Memus		OPR	\$	41,011	CDA
	on in Health and Dise	2260			OPR OPR	\$ \$	40,000	CFIC MRC
· ·	th Hawrysh, Z J (Hon			and Nutrition): Development of	OFR	Ф	75,353	MINC
	th Clandinin, M T (Ho	me	Economics, Food	ds and Nutrition): Bellows				
Gastroenterology rayhurn, P	Research Trust				OPR	\$	36,500	SYN
Regulation of Ene	rgy Balance				OPR	\$	388,726	AHFMR
-	Influences in Arrhyth	mog	jenesis		OPR	\$	50,250	AHFMR
Autonomic Nueral /ong, K	Influences in Arrythn	noge	enesis		OPR	\$	45,000	CHF
Investigations into	the Activity and Distr Factor in Human Ne	ribut utroi	ion of Adenylate	Cyclase and Binding Kinetics of	OPR	\$	42,773	MRC
Free Radical Form Diseases	nation by Human Neu	ıtrop	hils: Their Regul	ation and Role in Inflammatory	OPR	\$	8,900	MRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	15,000	AHFMR	9	\$	1,298,205	
Infrastructure	1	\$	132,835	MRC	16	\$	616,825	
Operating	44	\$	2,381,130	NSERC	1	\$	14,000	
Total	46	\$	2,528,965	Other Provincial Other Agencies	2 18	\$ \$	86,158 513,777	
				Total	46	Ф \$	2,528,965	
Ann and an a								
Department of Obs Investigator	tetrics and Gyn <i>Project</i>		ology		Award		Amount	Agency
cott, J Z								
Endometriosis Stu	dy				CTR	\$	37,100	SYN
Contracts				Other Agencies	1	\$	37,100	

Department of Paediatrics Investigator Project Title Award Chan, G Y Co-investigator with Schiff, D: Mechanism of Bilirubin Toxicity Coe, J Y Pharmacological Manipulation of the Neonatal Circulation Godel, J C Northern Infant Nutrition Study Grace, M G Co-investigator with Godel, J C: Northern Infant Nutrition Study Jaworski, M A Tissue-specific and Generalized Autoimmunity in the BB Rat and in Human Insulin-dependent Diabetes Mellitus (IDDM) Larke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone Lopaschuk, G D Coenzyme A Regulation of Cardiac Metabolism OPR \$ Lord, C Cognitive Disorder in Children with Autism Peer-directed Communication and Interaction in Children with Autism OPR \$ Peer-directed Communication and Interaction in Children with Autism McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities OPR \$ Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and with Tracer Kinetics of 13	Amount 100,000 32,342 46,295 24,340 42,500 13,440 16,030 13,355 32,537	Agency AHFMR HWC MRC MRC NSERC SSHRC MRC HWC
Co-investigator with Schiff, D: Mechanism of Bilirubin Toxicity	32,342 46,295 24,340 42,500 13,440 16,030 13,355	HWC MRC MRC NSERC SSHRC MRC
Pharmacological Manipulation of the Neonatal Circulation Godel, J C Northern Infant Nutrition Study Grace, M G Co-investigator with Godel, J C: Northern Infant Nutrition Study Iaworski, M A Tissue-specific and Generalized Autoimmunity in the BB Rat and in Human Insulin-dependent Diabetes Mellitus (IDDM) Arke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone Coenzyme A Regulation of Cardiac Metabolism OPR \$ Coenzyme A Regulation of Cardiac Metabolism OPR \$ Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome OPA \$ McCoy, E E Metabolic Studies of Down's Syndrome OPA \$ Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells An Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	32,342 46,295 24,340 42,500 13,440 16,030 13,355	HWC MRC MRC NSERC SSHRC MRC
Godel, J C Northern Infant Nutrition Study Grace, M G Co-investigator with Godel, J C: Northern Infant Nutrition Study Jaworski, M A Tissue-specific and Generalized Autoimmunity in the BB Rat and in Human Insulin-dependent Diabetes Mellitus (IDDM) Larke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone Lopaschuk, G D Coenzyme A Regulation of Cardiac Metabolism OPR \$ Lord, C Cognitive Disorder in Children with Autism Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	32,342 46,295 24,340 42,500 13,440 16,030 13,355	HWC MRC MRC NSERC SSHRC MRC
Northern Infant Nutrition Study Grace, M G Co-investigator with Godel, J C: Northern Infant Nutrition Study Jaworski, M A Tissue-specific and Generalized Autoimmunity in the BB Rat and in Human Insulin-dependent Diabetes Mellitus (IDDM) Larke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone Lopaschuk, G D Coenzyme A Regulation of Cardiac Metabolism Lord, C Cognitive Disorder in Children with Autism OPR \$ Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	46,295 24,340 42,500 13,440 16,030 13,355	MRC HWC MRC NSERC SSHRC MRC
Co-investigator with Godel, J C: Northern Infant Nutrition Study Jaworski, M A Tissue-specific and Generalized Autoimmunity in the BB Rat and in Human Insulin-dependent Diabetes Mellitus (IDDM) Jarke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone CTR \$ Jopaschuk, G D Coenzyme A Regulation of Cardiac Metabolism OPR \$ Jord, C Cognitive Disorder in Children with Autism OPR \$ Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome OPR \$ Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities OPR \$ Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	24,340 42,500 13,440 16,030 13,355	HWC MRC NSERC SSHRC MRC
Tissue-specific and Generalized Autoimmunity in the BB Rat and in Human Insulin-dependent Diabetes Mellitus (IDDM) Larke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone CTR \$ Lopaschuk, G D Coenzyme A Regulation of Cardiac Metabolism OPR \$ Lord, C Cognitive Disorder in Children with Autism OPR \$ Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome OPR \$ Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities OPR \$ Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	24,340 42,500 13,440 16,030 13,355	HWC MRC NSERC SSHRC MRC
Insulin-dependent Diabetes Mellitus (IDDM) Larke, R P Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone Lopaschuk, G D Coenzyme A Regulation of Cardiac Metabolism Lord, C Cognitive Disorder in Children with Autism Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome OPR \$ Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and	24,340 42,500 13,440 16,030 13,355	HWC MRC NSERC SSHRC MRC
Immunization Program Against Hepatitis B Infection to Residents of the Baffin Zone Copaschuk, G D Coenzyme A Regulation of Cardiac Metabolism OPR \$ Lord, C Cognitive Disorder in Children with Autism Peer-directed Communication and Interaction in Children with Autism McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	42,500 13,440 16,030 13,355	MRC NSERC SSHRC MRC
Coenzyme A Regulation of Cardiac Metabolism OPR \$ Lord, C Cognitive Disorder in Children with Autism Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	13,440 16,030 13,355	NSERC SSHRC MRC
Cognitive Disorder in Children with Autism Peer-directed Communication and Interaction in Children with Autism OPR \$ McCoy, E E Metabolic Studies of Down's Syndrome OPR \$ Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	13,440 16,030 13,355	NSERC SSHRC MRC
Peer-directed Communication and Interaction in Children with Autism McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	16,030 13,355	SSHRC MRC
McCoy, E E Metabolic Studies of Down's Syndrome Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells /an Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	13,355	MRC
Pabst, H F Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$		
Hemophilus Influenzae b (Hib) Vaccination Trial Amongst Infants in Inuit Communities Co-investigator with Godel, J C: Northern Infant Nutrition Study Vaccine Project in Nepal OPR \$ Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	32,537	HWC
Vaccine Project in Nepal Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$ OPR \$		
Schiff, D Mechanism of Bilirubin Toxicity in Cultured Neural Cells Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	5,000	ROTCL
Van Aerde, J Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$,	
Fat Utilization In Parenterally Fed Newborn Infants Measured with Indirect Caloricity and OPR \$	33,884	MRC
With Tracer Kinetics of 13	136,000	AHFMR
Co-investigator with Clandinin, M T (Home Economics, Foods and Nutrition): Bellows Assembly for Existing Isotope Nenman, W M		
Pathogenesis of Human Chlamydial Infections OPR \$	54,175	MRC
Type of Award No. Amount Source of Funds No.	Amount	
Contracts 1 \$ 24,340 AHFMR 2 \$	236,000	
Operating 12 \$ 525,558 MRC 5 \$ Total 13 \$ 549,898 NSERC 1 \$	190,209 13,440	
SSHRC 1 \$	16,030	
Other Federal 3 \$	89,219	
Other Agencies 1 \$ Total 13 \$	5,000 549,898	
Total 13 \$	343,030	
Department of Pathology		
Investigator Project Title Award	Amount	Agency
Amy, R M		
Co-investigator with Beattie, O B (Arts, Anthropology): Completion of the Excavation and Lin, C C		
Transfer from University of Calgary - Chromosome Structure and Function in Man and Other OPR \$ Eukaryotic Species	68,950	MRC
McGann, L E Annual Meeting of the International Society for Cryobiology, Edmonton, June 22-26, 1987 CTR \$	1,400	ATOUR
The Plasma Membrane: Target for Freezing Injury? OPR \$	47,280	MRC
Stinson, R A		
Studies of Human Alkaline Phosphates OPR \$ Walker, K	61,518	MRC
Co-investigator with Thomson, A B R (Medicine and Clinical Medicine): Functional Changes in the Irradiated \dots		
Type of Award No. Amount Source of Funds No.	Amount	
	177,748	
Contracts 1 \$ 1,400 MRC 3 \$ Operating 3 \$ 177,748 Other Provincial 1 \$ Other Provincial	1,400	

vestigator	Project	Title			Award		Amount	Agency	
llen, T M				·					
Prolongation of Plasn	na Half-Life of Lipe	osom	es		CTR	\$	46,390	LTI	
Membrane Fusion in		•			OPR	\$	38,415	MRC	
Drug Carriers and the	Mononuclear Ph	agocy	rte System		OPR	\$	45,310	MRC	
	Marine Natural Products with Antineoplastic Activities								
aer, H P									
	Smooth Muscle Structure and Function Satellite Symposium, International Union of Physiolgical Sciences, to be held in Banff, Alberta, Jul 1-5/86								
	Forskolin and Adenylate Cyclase								
lanachan, A S	ale Oyciase				OPR	\$	8,355	MRC	
Factors Affecting Pres	synaptic and Post	synar	otic Actions of A	denosine	OPR	\$	40,000	CHF	
ook, D A			_		OPR	\$	51,450	CHF	
	Blood Vessel Reactivity and Cerebrovascular Spasm								
Drug Receptors and I			· ·		OPR	\$	35,144	MRC	
	Veir, B (Surgery a	nd Cl	inical Surgery):	Studies on the Prevention of					
Chronic rank, G B									
	Satellite Symposium to the International Congress of the International Union of Physiological								
Sciences			.	,,,,,,	CFC	\$	15,000	AHFMR	
	Nature of the Opiate Drug Receptor and its Interaction with Narcotics and Endogenous							AMHAC	
Opiate-like Polypeption	des								
	Studies on Contraction of Skeletal Muscle						49,582	MRC	
				on Excitation-Contraction	CFC	\$	8,950	MRC	
Coupling in Skeletal,									
	e Properties of Op	piate I	Orug Receptors	Located on Excitable Cell	OPR	\$	30,535	MRC	
Membranes i ordon, T									
International Union of	Physiological Sci	ence	s (Sattelite Sym	posium)	CFC	\$	15,000	AHFMF	
Ca2+ Overload in Dys			` ,	,	OPR	\$	35,776	CHF	
Factors Influencing M	•				OPR	\$	38,588	MDA	
_		e and	Motor Unit Red	organization after Peripheral	OPR	\$	9,225	MRC	
Nerve Injuries						•	-,		
eiffenstein, R J	(0.1								
Neurological Actions	•	. –			OPR	\$	93,000	ACOH	
Role of Cholinergic Ir mith, P A	iput in Hippocamp	al Fu	nctioning		OPR	\$	10,943	MRC	
Modulation of Synapt	ic Transmission ir	Sym	pathetic Gangli	a and Spinal Cord	OPR	\$	34,652	MRC	
Type of Award	No.		Amount	Source of Funds	No.		Amount		
Conferences	4	\$	47,900	AHFMR	3	\$	38,950		
Contracts	1	\$	46,390	MRC	10	\$	271,111		
Operating	16	\$	602,227	Other Provincial	2	\$	121,170		
Total	21	\$	696,518	Other Agencies	6	\$	265,286		
				Total	21	\$	696,518		

nvestigator	Project Title	Award	Amount	Agency
Bourne, G A				-
Delineation of the Mediating the Bip Cheeseman, C I	e Roles of the Calcium and Cyclic Nucleotide Messenger Systems in chasic Release of Gonadotropins	OPR	\$ 37,430	MRC
	The The A D D (AA P) A D D (AA P)			
in the Irradiated .	vith Thomson, A B R (Medicine and Clinical Medicine): Functional Chanç	ges		
Co-investigator w Transport in	vith Thomson, A B R (Medicine and Clinical Medicine): Intestinal Membra	ane		
Co-investigator w Programming	with Thomson, A B R (Medicine and Clinical Medicine): Critical Period .			
Control of Intestir	nal Transport	OPR	\$ 8,283	MRC
Sensory Transdu	action in Mechanoreceptors and Photoreceptors	OPR	\$ 44,448	MRC

Investigator	Project Title			Award		Amount	Agency
Harvey, S							
Gamma-Counting Equipm	ent			EQP	\$	50,810	NSERC
Hutchison, K J Hemodynamics and Ather	osolorosis			OPR	\$	41,000	CHF
Jarvis, S M	OSCIETOSIS			Orm	Ψ	41,000	OH
Kinetic and Molecular Pro	perties of Nucleo	side Transport in	Animal Cells	OPR	\$	44,325	MRC
Pang, P K Anti-Hypertension, Peptide	es, and Vertebra	te Physiology Re	search	OPR	\$	212,673	AHFMR
Herbal Medicine Program		,,,,,,		CTR	\$	200,000	TAIHO
Routine Pharmacological	Testing of Comp	ounds		OPR	\$	21,739	TTU
Pearson, K G Morphological and Electro	nhysiological Stu	idies on Identified	d Neurons	OPR	\$	54,224	MRC
Poznansky, M J							
Soluble Enzyme Albumin	-		zyme Therapy	OPR CTR	\$ \$	81,408 62,500	MRC PMI
Prochazka, A							
Neural Control of Mamma	OPR	\$	230,000	AHFMR			
Sanders, E J Morphological and Physio	logical Aspects o	of Cellular Contac	t in Develonment	OPR	\$	36,069	MRC
Maintenance Grant for Ph	-		Dorolopmont	OPR	\$	6,048	MRC
Schachter, M	•						
Maintenance Grant for Ph Endogenous Active Comp	•	•	and Other Mediators	OPR OPR	\$ \$	1,750 6,094	MRC MRC
Stein, R B		and Other Mediators	TTR	Ψ	25,000	AHFMR	
	Commercialization of an Improved Artificial Leg Neurophysiological Studies on the Control of Movement						
Neurophysiological Studie	s on the Control	of Movement		OPR	\$	70,154	MRC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts	2 \$	262,500	AHFMR	3	\$	467,673	
Equipment Operating	1 \$ 15 \$	50,810 895,645	MRC NSERC	11 1	\$ \$	390,233 50,810	
Technology Transfer	1 \$	25,000	Other Agencies	4	\$	325,239	
Total	19 \$	1,233,955	Total	19	\$	1,233,955	
Department of Psychiatry	/						
Investigator	Project Title	;		Award		Amount	Agency
Baker, G B Co-investigator with Boisv	ort D.P. I./Sura	ony and Clinical S	urgony): Studios on the				
Pathophysiology	ert, D P 3 (Surge	ary and Chilical S	urgery). Studies on the				
Establishment of an Alber			Research Unit to Study the	OPR	\$	250,000	AMHAC
Neurochemical Bases of I Bland, R C	Psychiatric Disor	ders		•			
Prevalence of Mental Illne	ss in Edmonton			OPR	\$	44,100	AMHAC
Bornstein, R A	r C D. Establish	most of an Albert	a Montal				
Co-investigator with Bake Douglass, A B	r, G b. Establish	ment of an Albert	a Mental				
Grass Polygraph/EEG Ma	chine and IBM F	C-XT Computer	for Sleep Studies in	EQP	\$	28,100	AMHAC
Schizophrenia Project Co-investigator with Bake	r G B: Establish	ment of an Albert	a Montal				
Greenshaw, A J	i, a b. Establish	ment of all Albert	a Wentai				
			eatment of Affective Disorders	OPR	\$	47,400	AHFMR
Chronic Effects of B-phen Receptors	ylethylamine, Try	ptamine and Ant	tidepressants on Brain Amine	OPR	\$	36,949	AMHAC
Co-investigator with Bake	r. G B: Establish	ment of an Albert	ta Mental				
Joyce, A S							
Co-investigator with Piper Newman, S C	, W E: Precondit	ions and Hespon	se to Psychodynamic				
A Prospective Study of th	e Mortality of Sci	nizophrenic Patie	nts in Alberta, 1976-1985	OPR	\$	31,500	AMHAC
Preconditions and Respon	nee to Pevohadu	namic Interpretet	ions in Short-term, Individual	OPR	\$	37,569	AMHAC
Psychotherapy	ise to i sychody	namic interpretat	iono in Onoretenn, individual	Oin	Ψ	57,503	/ IIVII IAO
A Controlled Study of Pat	ient Suitability ar	d Outcome in Sh	ort-term Individual	OPR	\$	39,667	HWC
Psychotherapy	ioni ounaomity ar	id Outcome in Si	iori terrii, marvidaar	•		,	

Type of Award	No.	Amount	Source of Funds	No.	Amount
Equipment	1	\$ 28,100	AHFMR	1	\$ 47.400
Operating	7	\$ 487,185	Other Provincial	6	\$ 428,218
Total	8	\$ 515,285	Other Federal	1	\$ 39,667
		•	Total	8	\$ 515,285

Department of Surgery and Clinical Surgery

Investigator	Project	Title	-		Award		Amount	Agency
Boisvert, D P J					_			
			-	nosis and Pathophysiology	OPR	\$	28,620	ACB
Studies on the Pathophy					OPR	\$	21,912	ACB
Isoflurane Protects Agair	nst Focal Cerel	bral Is	schaemia Durin	g Hypotension in Primates	OPR	\$	18,000	ANAQ
	o, J (Engineeri	ng, El	ectrical Engine	ering): Medical Laser Facility				
Bowes, K L					000	•	44.005	
G I Motility Studies					OPR	\$	41,385	MRC
Callaghan, J C Thirty Years of Open He	art Surgery at t	the H	niversity of Albe	rta Hospital to be held in	CFC	\$	17,981	AHFMR
Edmonton, Alberta Septe			involving of 7 mbc	nta ricopital to bo field in	0.0	Ψ	17,501	7 (1 11 141) (
Dowman, R	- ,							
	Somatosensory	Evok	ced Potentials to	Control Psychogenic Pain	OPR	\$	13,248	AMHAC
Koo, J			041		0.00			
Introduction and Establis					OPR	\$	20,977	MSI
Reflux Disease	rest in the Dia	ignosi	s and Manager	nent of Gastroesophageal				
McKean, J D S								
	Photoradiation Therapy of Brain Tumors							ACB
Co-investigator with Tuli	o, J (Engineeri	ng, El	ectrical Engine	ering): Medical Laser Facility				
Laser Use for Capital Re			•		OPR	\$	15,000	RCMP
Rajotte, R V								
	mson, A B R (I	Medic	ine and Clinical	Medicine): Intestinal Membrane				
Transport in			_					
Cryopreservation of Pan					OPR	\$	48,265	MRC
		me E	conomics, Food	ds and Nutrition): Bellows				
Assembly for Existing Iso		_						
		me E	conomics, Food	ds and Nutrition): Demonstration				
of the in-vivo Significanc Russell, J C	е							
Ischemic Heart Disease	in a Rat Model				OPR	\$	30,000	CHF
Smith, R S	aa			•	• • • • • • • • • • • • • • • • • • • •	*	33,000	.
Mechanisms of Axonal T	ransport				OPR	\$	31,212	MRC
Stockbridge, N L					0.55	•		
Signal Processing by Ne					OPR	\$	53,350	AHFMR
Role of Calcium in Trans	smitter Release)			OPR	\$	10,211	MRC
Warnock, G L Transplantation of Huma	in lelate of Lan	aerha	ne		OPR	\$	44,500	AHFMR
Weir, B	iii isigis Ui Ldii	yema	ii io		0111	Ψ	77,000	ZI II IVII I
	n of Chronic C	erebr	al Vasospasm a	and Delayed Ischemia Following	OPR	\$	47,576	MRC
Subarachnoid Hemorrha			•	, ,			•	
Misoprostol/Neuro-GI St	udy				OPR	\$	3,500	SEARL
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	17,981	AHFMR	3	\$	115,831	
Operating	16	\$	473,041	MRC	5	\$	178,649	
Total	17	\$	491,022	Other Provincial	4	\$	109,065	
				Other Federal	1	\$	15,000	
				Other Agencies	4	\$	72,477	
				Total	17	\$	491,022	

Faculty of Nursing

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	2	\$ 5,680	Other Provincial	12	\$ 154,534
Operating	14	\$ 157,235	Other Federal	1	\$ 3,166
Total	16	\$ 162,915	Other Agencies	3	\$ 5,215
		-	Total	16	\$ 162,915

Faculty of Nursing

Investigat	or Project Title	Award		Amount	Agency
Davies, E	M				
Ch	nildhood Cancer as Chronic Disease: The Impact on Siblings, Student - K M Brett	OPR	\$	2,705	AARN
Fa	mily Stress and Coping, Student - M E Lock	OPR	\$	660	AARN
	Support the Western Consortium for Cancer Nursing Research - Priority Setting orkshop, University of Alberta, Jan 29-31/87	CFC	\$	2,500	AFNR
	e Meaning of Infant Cry Behavior to the Mother	OPR	\$	13,800	AFNR
Field, P A			·	,	
Av	Survey of Postpartum Nursing Care Practice in Community Health Agencies in Alberta, ward Held at University of Lethbridge by M J Houston - \$7,487.00	OPR			AFNR
Giovanne	श्या, P Irvey of Quality Assurance Programs in Selected Hospitals in Alberta	OPR	\$	50,000	AFNR
	ursing Instrument On-line Access System	OPR	φ \$	2,500	AFNR
Harrison,		0111	Ψ	2,300	ALINII
	ther Interactions with Preterm and Term Infants	OPR	\$	1,850	AARN
Ma	aternal Interactions with Term and Preterm Infants	OPR	\$	8,690	AFNR
Lander, J					
	evelopment of a Research Proposal to Study the Effects of Anxiety and Memory on Pain	OPR	\$	2,500	AFNR
MacPhail		OPR	\$	3,100	AFNR
Morse, J	nildhood Cancer as Chronic Disease: The Impact on Siblings, Student - K M Brett	OFN	Φ	3,100	AFIND
	orking Mothers: Coping with Breastfeeding	OPR	\$	41,380	AFNR
	ne Meaning and Use of Television in the Daily Lives of the Confined Elderly, Student - N acLeod-Engel	OPR	\$	1,446	ASSCH
Na	ational Health Research Scholar award	OPR	\$	3,166	HWC
Relyea, J					
	p-investigator with Giovannetti, P: Nursing Instrument On-line Access				
Ross, J [e Ethnography of Childhood: 2nd International Workshop, Camrose, Alberta, Jul 6-8/87	CFC	\$	3,180	AFNR
Skillen, D		OI O	Ψ	3,100	ALINIT
De	evelopment of an Occupational Risk Factor Assessment Instrument for Community-Based ealth Care Practitioners	OPR	\$	2,500	AFNR
Yonge, C		o==	_		4 = 1 . =
Αţ	oplication for Research Traineeship	OPR	\$	22,938	AFNR

Faculty of Pharmacy and Pharmaceutical Sciences

Type of Award	No.	Amount	Source of Funds	No.	Amount
Contracts	3	\$ 261,480	AHFMR	3	\$ 148,412
Equipment	1	\$ 33,412	MRC	15	\$ 429,479
Infrastructure	1	\$ 40,000	NSERC	1	\$ 37,060
Operating	22	\$ 637,272	Other Provincial	6	\$ 169,793
Technology Transfer	2	\$ 112,060	Other Agencies	4	\$ 299,480
Total	29	\$ 1,084,224	Total	29	\$ 1,084,224

Faculty of Pharmacy and Pharmaceutical Sciences

Investigator	Project Title	Award		Amount	Agency
Coutts, R T					
Co-inve Mental	estigator with Baker, G B (Medicine, Psychiatry): Establishment of an Alberta				
Detaile	d Trace Organic Analysis of Edmonton Water	CTR	\$	2,730	HRUD
Co-inve	estigator with Pasutto, F M: Biosynthesis and Pharmacological				
Co-inve	estigator with Jamali, F: Stereoselective Pharmacokinetics				
Labora	estigator with Crawford, R J (Science, Chemistry): Mass Spectrometry Service tory				
Danielson, T					
Co-inve Mental	estigator with Baker, G B (Medicine, Psychiatry): Establishment of an Alberta				
Metabo Dean	olism of Neurochemical Agents	OPR	\$	7,390	MRC
	oport of Medical Research using the SLOWPOKE Nuclear Reactor	INF	\$	40,000	AHFMR
Genera	al Research Grant to the Dean for the Support of Research in the Faculty of acy and Pharmaceutical Sciences	OPR	\$	15,000	MRC
	acy Patient Education	OPR	\$	5,670	WRFN
Flanagan, R J					
	estigator with Wiebe, L I: Novel Radiolabelled Steroids for				
Jamali, F	selective Pharmacokinetics of Certain Non-Steroidal Antiinflammatory Drugs	OPR	\$	37,430	MRC
	selective Pharmacokinetics of Ketoprofen	CTR	\$	75,000	RHONE
Joshua, A V	Sciolist Framidocine to City of the	0111	Ψ	, 0,000	THIONE
	estigator with Scott, J R: Development of SPECT Brain Blood				
Knaus, E E	Con O all Consults I also Abbertally and all Abbertalla Abbertal	000	Φ.	04.000	4.0.D
	esign, Synthesis and Evaluation of Novel Heterocycles with Antineoplastic Activity	OPR	\$	61,990	ACB
and Ag		OPR	\$	41,580	MRC
Suppoi		OPR	\$	38,358	MRC
	esign and Pharmacological Evaluation of Heterocyclic Calcium Slow Channel Blockers	OPR	\$	9,000	MRC
	t-Packard 5995A Gas Chromatograph-Mass Spectrometer (GC-MS), Maintenance ct and Technician- Operator	OPR	\$	20,000	MRC
The De	esign and Pharmacological Evaluation of New Nitrogen Heterocycles	OPR	\$	40,166	MRC
	estigator with Wiebe, L I: Radiohalogenated Pyrimidine Nucleosides				
	estigator with Crawford, R J (Science, Chemistry): Mass Spectrometry Service				
Labora Micetich, R G	tory				
	Anti-Viral Agents	TTR	\$	75,000	AHFMR
	estigator with Baker, G B (Medicine, Psychiatry): Establishment of an Alberta		*	, 0,000	7.1.1.
The De	esign, Synthesis, and Study of New Beta-Lactam Compounds which are Expected to ss Beta-Lactamase Inhibitory Activity and/or a Useful Spectrum of Antibiotic Activity	CTR	\$	183.750	TAIHO
Noujaim, A A	,				
	estigator with Longenecker, B M (Medicine, Immunology): Radioimmunoimaging and ion				
Anticar	ncer Drug Targetting Using Monoclonal Antibodies	OPR	\$	9,900	ACB
Aliphat	ic Amines as Potential Radiopharmaceuticals for the Study of Lung Function	OPR	\$	43,202	MRC

Investigator	Project Title	Award		Amount	Agency
Pasutto, F M					
	rith Jamali, F: Stereoselective Pharmacokinetics				
Biosynthesis and	Pharmacological Evaluation of Immunosuppressive Cyclosporins	OPR	\$	8,078	MRC
Co-investigator w Laboratory	vith Crawford, R J (Science, Chemistry): Mass Spectrometry Service				
Co-investigator w	rith Jamali, F: Stereoselective Pharmacokinetics				
Rogers, J A		_			
	ilability of Drugs Formulation with Phospholipids	OPR	\$	46,899	MRC
Scott, J R	SPECT Brain Blood Flow Radiodiagnostic Agents	TTR	\$	37,060	NSERC
Shysh, A J	SPECT Brain Blood Flow Radiodiagnostic Agents	1 In	Ф	37,000	NOENU
	Uptake in T-antigen Expressing Tumors	OPR	\$	3,750	MRC
	gation of Radiolabelled Conjugated Lectins	OPR	\$	27,063	MRC
Tam, Y K	g		•	_:,	
	s of Lidocaine during Prolonged Intravenous Infusion	OPR	\$	38,000	CHF
Wiebe, L I		000	•		
	on of Hypoxic Cells with y-Emitting Radiolabelled Radiosensitizers	OPR	\$	9,613	ACB
	on of Hypoxic Cells with y-Emitting Radiolabelled Radiosensitizers	OPR	\$	47,730	ACB
	led Steroids for Tracing Hormone Receptor Sites	OPR	\$	34,890	ACB
	Array Detector for HPLC Separations	EQP	\$	33,412	AHFMR
Co-investigator w Hepatitis B Antivi	ith Tyrrell, D L (Medicine, Medical Microbiology and Infectious Diseases): ral Research				
Co-investigator w	rith Knaus, E E: Hewlett-Packard 5995A Gas Chromatograph-Mass				
In vivo Metabolis	m of Fluorinated Nucleosides Using Whole-Body NMR	OPR	\$	44,342	MRC
Radiohalogenate	d Pyrimidine Nucleosides for Use in Diagnostic Oncology and Virology	OPR	\$	47,221	MRC
Wolowyk, M W	•			•	
Co-investigator w	vith Knaus, E E: The Design and Pharmacological				

Faculty of Physical Education and Recreation

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	1	\$ 881	NSERC	2	\$ 20,688
Equipment	1	\$ 10,003	SSHRC	1	\$ 881
Operating	7	\$ 221,955	Other Provincial	3	\$ 174,800
Total	9	\$ 232,839	Other Federal	3	\$ 36,470
		•	Total	9	\$ 232,839

Department of Physical Education and Sport Studies

Investigator	Project Title	Award	Amount	Agency
Belcastro, A N				
Etiology of Musc	le Fatigue Cellular Perspectives	OPR	\$ 10,685	NSERC
Swinging-bucket	Rotor (50.1) for Isolation of Organelles Involved with Ca2+ Metabolism	EQP	\$ 10,003	NSERC
Grace, M G	•			
Co-investigator v	vith Pabst, H F (Medicine, Paediatrics): Vaccine Project in Nepal			
Hall, A				
The Status of We	omen in NSOs	OPR	\$ 23,000	FAS
Hinings, C R				
An Analysis of th	e Managerial Arrangements & Implementation of Plans in Voluntary Sport	OPR	\$ 15,800	ARP
Organizations				
Quinney, H A				
Co-investigator v	vith Belcastro, A N: Swinging-bucket Rotor (50.1) for			
Alberta Fitness N	letwork	OPR	\$ 156,000	RPWF
High Velocity Re	sistance Training for Ice Hockey	OPR	\$ 8,470	SPC

restigator	Project	Title			Award		Amount	Agency
ack, T								
Co-investigator with Hinin	igs, C R: An A	nalys	is of the Manag	gerial Arrangements				
Co-investigator with Hinin	-		_	-				
Organization and Implem	entation		-					
Co-investigator with Hall,	A: The Status	of W	omen in NSOs					
A National Conference or	n Sport Admin	istrati	on		OPR	\$	5,000	SPC
Research Into Sport Adm	inistration/Ma	nager	ment, Edmontoi	n, Alberta, Oct 23-25/86	CFC	\$	881	SSHRC
tkinson, E J					0.5.5	_		
Resource Kit on Women	and Physical i	Activit	ty		OPR	\$	3,000	RPWF
Type of Award	No.	_	Amount	Source of Funds	No.		Amount	
Conferences	1	\$	881	NSERC	2	\$	20,688	
Equipment	1	\$	10,003	SSHRC	1	\$	881	
Operating	7 9	\$ \$	221,955	Other Provincial	3	\$	174,800	
Total	9	Þ	232,839	Other Federal Total	3 9	\$ \$	36,470 232,839	
aculty of Rehabilit	tation Me	edic	cine					
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	7	\$	182,083	NSERC	1	\$	12,500	
	,		182,083	Other Provincial	i	\$	75,000	
	7	S	102.003					
Total	7	\$	102,003	Other Federal	1		38,722	
	7	\$	162,063			\$ \$ \$		
Total			102,003	Other Federal Other Agencies	1 4	\$ \$	38,722 55,861	
Total partment of Occupation		ру	102,003	Other Federal Other Agencies	1 4	\$ \$	38,722 55,861	Agency
Total partment of Occupations estigator	onal Thera	ру	102,003	Other Federal Other Agencies	1 4 7	\$ \$	38,722 55,861 182,083	Agency
Total partment of Occupation estigator ambhani, Y	onal Thera Project	py Title		Other Federal Other Agencies	1 4 7	\$ \$	38,722 55,861 182,083	<i>Agency</i> MSI
Total partment of Occupation estigator ambhani, Y Efficacy of Three Physica	onal Thera Project	py Title		Other Federal Other Agencies Total	1 4 7 Award	\$ \$	38,722 55,861 182,083 <i>Amount</i>	
Total partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating	Onal Thera Project	py Title		Other Federal Other Agencies Total Total al Auxillary Crutch Walking	1 4 7 Award	\$ \$	38,722 55,861 182,083 <i>Amount</i>	
partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating	onal Thera Project Il Training Pro	Py Title gram		Other Federal Other Agencies Total Total al Auxillary Crutch Walking	1 4 7 7 Award OPR	\$ \$	38,722 55,861 182,083 <i>Amount</i> 19,936	MSI
Partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical estigator	Onal Thera Project	Py Title gram		Other Federal Other Agencies Total Total al Auxillary Crutch Walking	1 4 7 Award	\$ \$	38,722 55,861 182,083 <i>Amount</i>	MSI
partment of Occupation estigator embhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator estigator erkson, H M	Project Therapy Project	Py Title gram: Title	s on Submaxim	Other Federal Other Agencies Total Total al Auxillary Crutch Walking	1 4 7 7 Award OPR	\$ \$	38,722 55,861 182,083 <i>Amount</i> 19,936	MSI
epartment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical estigator arkson, H M Co-investigator with Bhar Training	Project Therapy Project	Py Title gram: Title	s on Submaxim	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies	1 4 7 7 Award OPR	\$ \$	38,722 55,861 182,083 <i>Amount</i> 19,936	MSI
partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator estigator irkson, H M Co-investigator with Bhar Training	Project Therapy Project mbhani, Y (Octoor)	Py Title gram: Title	s on Submaxim	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies	Award Award Award	\$ \$ \$	38,722 55,861 182,083 <i>Amount</i> 19,936 19,936 <i>Amount</i>	MSI Agency
partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator estigator erkson, H M Co-investigator with Bhar Training	Project Therapy Project mbhani, Y (Oc	Py Title gram: Title	s on Submaxim	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies	Award OPR 1 Award OPR	\$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount	MSI Agency
partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator estigator erkson, H M Co-investigator with Bhar Training	Project Therapy Project mbhani, Y (Oc	Py Title gram: Title	s on Submaxim	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies	Award Award Award	\$ \$ \$	38,722 55,861 182,083 <i>Amount</i> 19,936 19,936 <i>Amount</i>	MSI Agency
partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator orkson, H M Co-investigator with Bhar Training mar, S Functional Evaluation of Static and Dynamic Streener, M C	Project Therapy Project mbhani, Y (Och	Py Title grams	s on Submaxim	Other Federal Other Agencies Total all Auxillary Crutch Walking Other Agencies Efficacy of Three Physical	Award OPR 1 Award OPR OPR	\$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500	Agency ACOH NSERC
estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator orkson, H M Co-investigator with Bhar Training	Therapy Project Therapy Project Thuman Back Theraph	Py Title grams Title cupat	s on Submaxim tional Therapy):	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant	Award OPR 1 Award OPR OPR OPR	\$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722	Agency ACOH NSERC HWC
estigator ambhani, Y Efficacy of Three Physical Performance Operating estigator coperating estigator irkson, H M Co-investigator with Bhar Training mar, S Functional Evaluation of Static and Dynamic Stremer, M C Impact of Pre-term Birth of Effect of Early Physical T	Therapy Project Therapy Project Thuman Back agth of the Neurom herapy on the	py Title grams Title cupat	s on Submaxim tional Therapy): Development of romotor Status	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant of the High Risk Infant	Award OPR 1 Award OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722 12,000	AGENCY ACOH NSERC HWC MDBDF
partment of Occupation estigator estigator embhani, Y Efficacy of Three Physical Performance Operating epartment of Physical estigator estigator erkson, H M Co-investigator with Bhar Training mar, S Functional Evaluation of Static and Dynamic Stremer, M C Impact of Pre-term Birth of Effect of Early Physical T	Therapy Project Therapy Project Thuman Back agth of the Neurom herapy on the	py Title grams Title cupat	s on Submaxim tional Therapy): Development of romotor Status	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant	Award OPR 1 Award OPR OPR OPR	\$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722	Agency ACOH NSERC HWC
estigator ambhani, Y Efficacy of Three Physical Performance Operating estigator co-investigator with Bhar Training mar, S Functional Evaluation of Static and Dynamic Stremer, M C Impact of Pre-term Birth of Effect of Early Physical T Correlation of Neuromotor	Therapy Project Therapy Project Thuman Back agth of the Neurom herapy on the	py Title grams Title cupat	s on Submaxim tional Therapy): Development of romotor Status	Other Federal Other Agencies Total al Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant of the High Risk Infant	Award OPR 1 Award OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722 12,000	AGENCY ACOH NSERC HWC MDBDF
partment of Occupation estigator ambhani, Y Efficacy of Three Physical Performance Operating Partment of Physical Pestigator estigator	Therapy Project Therapy Project Therapy Project Thuman Back Therapy Therapy Project Therapy Project Therapy Project	py Title grams Title cupat	s on Submaximotional Therapy): Development of romotor Status Magnetic Reso	Other Federal Other Agencies Total all Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant of the High Risk Infant nance Imaging in the Preterm Source of Funds	Award OPR 1 Award OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722 12,000 8,000	AGENCY ACOH NSERO HWC MDBDF
estigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator orkson, H M Co-investigator with Bhar Training mar, S Functional Evaluation of Static and Dynamic Stremer, M C Impact of Pre-term Birth of Effect of Early Physical T Correlation of Neuromoto Infant	Therapy Project Therapy Project mbhani, Y (Och Human Back ngth of the Neurom herapy on the or Assesments No.	py Title grams Title cupat	s on Submaxim tional Therapy): Development of romotor Status Magnetic Reso	Other Federal Other Agencies Total ral Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant of the High Risk Infant nance Imaging in the Preterm	Award OPR 1 Award OPR OPR OPR OPR OPR OPR OPR OP	\$ \$ \$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722 12,000 8,000 Amount	AGENCY ACOH NSERC HWC MDBDF
epartment of Occupation restigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical Pestigator restigator re	Therapy Project Therapy Project mbhani, Y (Och Human Back ngth of the Neurom herapy on the or Assesments No.	py Title grams Title cupat	s on Submaximotional Therapy): Development of romotor Status Magnetic Reso	Other Federal Other Agencies Total Total Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant of the High Risk Infant nance Imaging in the Preterm Source of Funds NSERC Other Provincial Other Federal	Award OPR 1 Award OPR OPR OPR OPR OPR OPR OPR OP	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722 12,000 8,000 Amount 12,500	AGENCY ACOH NSERC HWC MDBDF
epartment of Occupation restigator ambhani, Y Efficacy of Three Physical Performance Operating epartment of Physical restigator arkson, H M Co-investigator with Bhar Training Imar, S Functional Evaluation of Static and Dynamic Strent Der, M C Impact of Pre-term Birth of Effect of Early Physical T Correlation of Neuromoto Infant Type of Award	Therapy Project Therapy Project mbhani, Y (Och Human Back ngth of the Neurom herapy on the or Assesments No.	py Title grams Title cupat	s on Submaximotional Therapy): Development of romotor Status Magnetic Reso	Other Federal Other Agencies Total all Auxillary Crutch Walking Other Agencies Efficacy of Three Physical the Premature Infant of the High Risk Infant nance Imaging in the Preterm Source of Funds NSERC Other Provincial	Award OPR 1 Award OPR OPR OPR OPR OPR OPR OPR I 1 1	\$\$ \$ \$	38,722 55,861 182,083 Amount 19,936 19,936 Amount 75,000 12,500 38,722 12,000 8,000 Amount 12,500 75,000	ACOH NSERO HWC MDBDF

Department of Speech Pathology and Audiology

Investigator	Project Title		Award	Amount	Agency
Boberg, E Comprehensive	Stuttering Treatment Program		OPR	\$ 15,925	MSI
Operating		Other Agencies	1	\$ 15,925	

Faculty of Science

Type of Award	No.		Amount	Source of Funds	No.	Amount
Conferences	4	\$	54,060	AHFMR	2	\$ 50,222
Contracts	44	\$	1,628,275	MRC	2	\$ 52,653
Equipment	17	\$	1,648,316	NSERC	281	\$ 9,212,233
Infrastructure	6	\$	198,071	SSHRC	2	\$ 12,177
Operating	301	\$	7,981,910	Other Provincial	34	\$ 1,306,648
Technology Transfer	2	\$	250,680	Other Federal	36	\$ 776,275
Total	374	\$	11,761,312	Other Agencies	17	\$ 351,104
		·	, ,	Total	374	\$ 11,761,312

Department of Botany

Investigator	Project Title	Award		Amount	Agency
Cass, D D		<u> </u>			
Research on Ga Pseudomona	mete Cell Fusion in Flowering Plants; Brassica Root Infection by	OPR	\$	15,000	NSERC
Cossins, E A	A stat Manage allows to Disease	000	Φ.	E0.000	NCEDO
*** ** *	o Acid Metabolism in Plants	OPR	\$	59,666	NSERC
Dale, M R T	vith Gifford, D J: DNA Isolation and Subcellular Fractionation				
A Detailed Ecolo	gical Study of Saxicolous Crustose Lichen Community in Jasper National raduate Student, E A John	OPR	\$	9,500	AERT
Spatial Distributi	on in Communities of Saxicolous Lichens	OPR	\$	15,000	NSERC
Denford, K E					
_	vith Gifford, D J: DNA Isolation and Subcellular Fractionation		_		
	c Studies of Vascular Plants with Special Reference to their Biochemical he Role of Historical Factors in their Evolution	OPR	\$	21,817	NSERC
	vices to Describe the Status and the Origin of Cirsium minganense	CTR	\$	7,532	PC
Gifford, D J		505	•	04.005	NOEDO
	d Subcellular Fractionation Using an Ultracentrifuge	EQP	\$	61,025	NSERC
	rol of Storage Protein Mobilization in Pine Seeds	OPR	\$	20,000	NSERC
Hickman, M	al, Paleoenvironmental and Algal Studies in Alberta	OPR	\$	20,160	NSERC
Hoddinott, J	al, Falcochvillorinar and Algar closics in Alberta	0, ,,	Ψ	20,100	HOLING
	y TTC Analysis on Hardened Roots/Shoots for Pine and Spruce	CTR	\$	3,480	AF
White Spruce Se	edlings Research Project	CTR	\$	13,970	AF
	nd Nutritional Influences on Phloem Transport	OPR	\$	17,977	NSERC
Co-investigator	vith Taylor, G J: Basic and Applied Aspects of Aluminum				
La Roi, G H					
PRUF Program: Productivity - Sit Western Alberta	Development of Lodgepole Pine and White Spruce Site Index Curves and e Relationships from Ecologically Classified Permanent Sample Plots in	CTR	\$	15,391	EC
Structure and Fu	inction of Boreal Forest Ecosystems	OPR	\$	14,400	NSERC
Packer, J G					
	Phytogeographical Studies in the Flora of Western Canada and the Arctic	OPR	\$	4,800	NSERC
Northern Supple Canada and the	ment - Taxonomic and Phytogeographical Studies in the Flora of Western Arctic	OPR	\$	1,360	NSERC
Co-investigator	vith Denford, K E: Professional Services to Describe				
Stockey, R A		000	•	00.075	NOEDC
Cretaceous and	Teritary Plants from Western Canada	OPR	\$	23,040	NSERC

Investigator	estigator Project Title							Agency	
Taylor, G J									
Physiological Mechanisr				m Aestivum and Other Plants	OPR	\$	17,280	NSERC	
Co-investigator with Giffe				ular Fractionation Derance in Canadian Wheat	OPR	\$	50,000	NSERC	
Cultivars	CIS OF AIGINITION	anu	wanganese re	oranee in Ganadian Wheat	Orri	Ψ	00,000	1102110	
Vitt, D H Photographic Field Guid	le				OPR	\$	27,145	EIC	
The Ecology and System		ytes,	, and the Chara	acterization and Development of	OPR	\$	40,320	NSERC	
the Mire Ecosystem Co-investigator with Pre	pas, E E (Zoolog	gy): I	Meanook Biolog	gical Research Station					
Type of Award	No.		Amount	Source of Funds	No.		Amount		
Contracts		\$	40,373	NSERC	15	\$	381,845		
Equipment	1	\$	61,025	Other Provincial	3	\$	26,950		
Operating Total		\$ \$	357,465 458,863	Other Federal Total	3 21	\$ \$	50,068 458,863		
Department of Chemist	ry								
Investigator	Project T	itle			Award		Amount	Agency	
Armour, M A Recycling and Disposal	of Chemical Wa	stes			OPR	\$	70,800	ACOH	
Development and Testir				or Hazardous Pharmaceuticals	OPR	\$	12,422	AERT	
Ayer, W A Lycopodium Alkaloids: Potential Therapeutic Agents for for the Treatment of Alzheimer's Disease							31,560	AMHAC	
Investigation of American Leaf Spot Disease - Joint Application with the University of Costa							48,600	IDRC	
Rica Editorial Support Services - To Cover the Cost of Editorial Support Services and Incidental Expenses Incurred by Dr W A Ayer as Editor of the Canadian Journal of Chemistry							60,000	NRC	
Structural and Synthetic Studies in Natural Products							77,426	NSERC	
Co-investigator with Jor Co-investigator with Kot									
Phytochemical Investiga	ation of Importar			Blue Stain Fungi Associated with	OPR	\$	67,000	NSERC	
the Mountain Pine Beetl Bertie, J E	le								
Vibrational Spectroscop	y, Optical and D	ielec	ctric Constants		OPR	\$	38,399	NSERC	
Birss, F W Molecular Spectroscopy	and Structure				OPR	\$	23,071	NSERC	
Brown, R S Physical Organic Studie	es of Hydrolysis	Read	ctions, Electrop	hilic Halogenation and Enzyme	OPR	\$	50,305	NSERC	
Models			•			·			
Design, Synthesis and S Browne, L M	Study of Biomim	etic	Catalysts for O	rganophosphate Ester Hydrolysis	CTR	\$	72,605	USDA	
Co-investigator with Arr	•	_	•						
Co-investigator with Ayo Cantwell, F F	_								
Liquid Chromatography Cavell, R G	, Ion Exchange	and :	Solvent Extract	tion	OPR	\$	49,345	NSERC	
SIMS Study of Surface	,				CTR	\$	33,510	AOSTR	
Synthetic Inorganic Che Clarke, B L	emistry and Elec	tron	Spectroscopy		OPR	\$	45,842	NSERC	
Stability, Dynamics and Clive, D L J	Chaos in Comp	olex (Chemical Netwo	orks	OPR	\$	16,320	NSERC	
Studies in Methodology					OPR	\$	38,061	NSERC	
Co-investigator with Ko Co-investigator with Jor									
Cowie, M			-						
Co-investigator with Gra Co-investigator with Jor				frared Spectrometer Centre					
Metal-Metal Cooperativ			-		OPR	\$	40,129	NSERC	
Crawford, R J Mass Spectrometry Ser	rvice Laboratorv				INF	\$	28,800	NSERC	
	Mass Spectrometry Service Laboratory								

Dovichi. N Mode Locked Argon Ion Laser Laser Based Sub-Nanoliter Analysis Laser Based Sub-Nanoliter Laser Laser						
Mode-Locked Argon fon Laser Laser Based Sub-Nanotifor Analysis SERC	Investigator	Project Title	Award		Amount	Agency
Mode-Locked Argon fon Laser Laser Based Sub-Nanotifor Analysis SERC	Dovichi, N					
Dunford, H B Co-investigator with Westlake, D W (Microbiology): Technical Support for Fermentation OPR \$ 45,368 NSERC Fraga, S Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions OPR \$ 25,109 NSERC Fraga, S Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions OPR \$ 25,109 NSERC Freeman, GR Electorors in Fluids, Radiation Chemistry OPR \$ 5,688 NSERC Freeman, GR Electorors in Fluids, Radiation Chemistry Accurate Theoretical Treatment of Treatment Chemistry and C-H Activation OPR \$ 76,799 NSERC Graham, W A G Organometallic Chemistry and C-H Activation OPR \$ 76,799 NSERC Co-investigator with Microscycli, Grabinate and Upgrade Package EOP \$ 14,500 NSERC Harrison, D J Investigations of Internal Potentials and Concentration Profiles within lon Spectic OPR \$ 17,000 CIBAC Biodicinal Profiles and Chemically Sensitive Devices EOP \$ 22,000 NSERC Co-investigator with Battes, H P (Engineering, Electrical Engineering): Integrated Sensors on Signature Sensors on Sensors and Calcium Sensors on Sensors and Calcium Sensors and Calcium Senso	•	on Ion Laser	EQP	\$	84,400	NSERC
Co-investigator with Westlake, D.W. (Microbiology): Technical Support for Fermentation Heme Enzyme Mechanisms, Oxygan Activation in Biology Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions Accurate Theoretical Prediction of the Energy Levels of Atoms Co-investigator with Crawford, R.J. Mass Spectrometry Service Laboratory Co-investigator with Lordan, R.B. Alberta High Field NMR Centre Co-investigator with Mortay, G. Upgrade of the 400 MHz High-field Harrison, O.J. Harri		Nanoliter Analysis	OPR	\$	38,399	NSERC
Home Enzyme Mechanisms, Oxygen Activation in Biology OPR S S S NSERC Fraga, S Fraga, S Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions OPR S 25,109 NSERC Structure and Interactions OPR S 5,698 NSERC Structure and Interactions OPR S 5,698 NSERC Structure and Interactions OPR S 5,698 NSERC OPE OPE		th Wastlake, D.W. (Microbiology): Technical Support for Fermantation				
Fraga, S Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions- Accurate Theoretical Prediction of the Energy Levels of Atoms and Their Positive Ions- Awarded 40 hours Vector Computer Access Structure and Interactions Freeman, G R Electrons in Fluids, Radiation Chemistry Co-investigator with Crawford, R J: Mass Spectrometry Service Laboratory Graham, W A G Organometallic Chemistry and C-H Activation Co-investigator with Jordan, R B: Alberta High Field NMR Centre Fourier Transform Infrared Spectrometer and Upgrade Package Co-investigator with Notocych, G: Upgrade of the 400 MHz High-Field Harrison, D J Investigator with Stocych, G: Upgrade of the 400 MHz High-Field Harrison, D J Investigator with Baties, H P (Engineering, Electrical Engineering): Integrated Sensors on Silicon	_		OPR	\$	45.368	NSERC
Awarded 40 hours Vector Computer Access' Structure and Interactions Structure and Interactions Preeman, G. R. Electrons in Fluids, Radiation Chemistry Co-investigator with Crawford, R. J. Mass Spectrometry Service Laboratory Graham, W. A. G. Go-investigator with stora, B. B. Alberta High Field NMR Centre Fourier Transform Infrared Spectrometer and Upgrade Package Co-investigator with Kotovych, G: Upgrade of the 400 MHz High-field Harrison, Graph State of the 400 MHz High-field Membranes and Chemically Sensitive Devices Membranes and Chemically Sensitive Devices Membranes and Chemically Sensitive Devices Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Spectrophotometer and Microcomputer Spatially Resolved Absortion Spectrometer for Membranes Studies Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Organic Film Preparation for Integrated Sub-contract: To Evaluate Ion-selective Field Effect Transistors Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Organic Film Preparation for Integrated Sub-contract: To Evaluate Ion-selective Field Effect Transistors Chemical Thermodynamics and Colloid Science Applied to Oil Sands Chemical Thermodynamics Chemical Thermodynamics Chemical Thermodynamics Co-investigator with Kebards and System for Sectorochemical Analysis on Pressure Chromatography System Co-investigator with Kebards and Systems for Spectroche	_	ionariisino, Oxygon richivation in Biology	0, ,,	Ψ	10,000	1102110
Freeman, G. R. Electrons in Fluids, Radiation Chemistry Co-investigator with Crawford, R. J.: Mass Spectrometry Service Laboratory Graham, W. A. G. Organometallic Chemistry and G-H Activation Organometallic Chemistry and G-H Activation Co-investigator with Joadan, R. B.: Alberta High Fleid NMR Centre Fourier Transform Infrared Spectrometer and Upgrade Package Co-investigator with Notovych, G: Upgrade of the 400 Mrlz High-flied Harrison, Destination of Internal Potentials and Concentration Profiles within Ion Specific Membranes Membranes and Chemically Sensitive Devices Co-investigator with Baltes, H. P. (Engineering, Electrical Engineering): Integrated Sensors on Silcon Spatially Resolved Absortion Spectrometer for Membrane Studies Co-investigator with Baltes, H. P. (Engineering, Electrical Engineering): Spectrophotometer and Microcomputer Spatially Resolved Absortion Spectrometer for Membrane Studies Co-investigator with Baltes, H. P. (Engineering, Electrical Engineering): Spectrophotometer and Microcomputer Spectroscopic Analysis of Concentration Profiles Within Membranes Co-investigator with Baltes, H. P. (Engineering, Electrical Engineering): Organic Film Preparation for Integrated Sub-contract: To Evaluate Ion-selective Field Effect Transistors Co-investigator with Baltes, H. P. (Engineering, Electrical Engineering): Organic Film Preparation for Integrated Sub-contract: To Evaluate Ion-selective Field Effect Transistors Chemical Thermodynamics and Colloid Science Applied to Oil Sands Chemical Thermodynamics Medium-Pressure Chromatography System Co-investigator with Jordan, R. B. Alberta High Field NMR Centre. Development of ELISA Assays for Glocosystimansferases Co-investigator with Kebarle, P. Instrumental and Analytical Methodology. Co-investigator with Kebarle, P. Instrumental and Analytical Methodology. Co-investigator with Kebarle, P. Instrumental and Analytical Methodology. Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High F			OPR	\$		
Electrons in Fluids, Radiation Chemistry Co-investigator with Orawford, R J: Mass Spectrometry Service Laboratory		ractions	OPR	\$	25,109	NSERC
Co-investigator with Crawford, R. J. Mass Spectrometry Service Laboratory. Graham, W. A. G. Organometallic Chemistry and C-H Activation Co-investigator with Jordan, R. B. Alberta High Field NMR Centre		Radiation Chemistry	OPR	\$	57 698	NSERC
Graham, W.A. G. Organometallic Chemistry and C-H Activation Co-investigator with Jordan, R.B. Alberta High Field NMR Centre		•	OI II	Ψ	07,000	NOLINO
Co-investigator with Jordan, R B: Alberta High Field NMR Centre	Graham, W A G					
Fourier Transform Infrared Spectrometer and Upgrade Package Co-investigator with Kotovych, G: Upgrade of the 400 MHz High-field Harrison, D J Investigations of Internal Potentials and Concentration Profiles within Ion Specific Membranes Membranes and Chemically Sensitive Devices Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Integrated Sensors on Silicon Spatially Resolved Absortion Spectrometer for Membrane Studies Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Spectrophotometer and Microcomputer Spatially Resolved Absortion Spectrometer for Membrane Studies Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Spectrophotometer and Microcomputer Spectroscopic Analysis of Concentration Profiles Within Membranes Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Organic Film Preparation for Integrated	<u>-</u>		OPR	\$	76,799	NSERC
Co-investigators with Kotovych, G: Upgrade of the 400 MHz High-field	-		FOD	Φ	14.500	NOEDO
Harrison, D.J Merestigations of Internal Potentials and Concentration Profiles within Ion Specific OPR \$ 17,000 CIBAC Membranes and Chemically Sensitive Devices OPR \$ 24,000 NSERC Co-investigator with Baltes, H.P. (Engineering, Electrical Engineering): Integrated Sensors on Silicon		· · · · · · · · · · · · · · · · · · ·	EQP	\$	14,500	NSERC
Investigations of Internal Potentials and Concentration Profiles within Ion Specific Membranes Membranes and Chemically Sensitive Devices Co-investigator with Baltes, HP (Engineering, Electrical Engineering): Integrated Sensors on Silicon		in Kolovych, G. opgrade of the 400 MHz High-field				
Membranes and Chemically Sensitive Devices Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Integrated Sensors on Silicon	Investigations of Ir	nternal Potentials and Concentration Profiles within Ion Specific	OPR	\$	17,000	CIBAC
Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Integrated Sensors on Silicon		Pharmically Considius Davissa	OPP	Φ	24.000	NCEDO
Silicon			Orn	Φ	24,000	NSENC
Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Spectrophotometer and Microcomputer		an balles, 1117 (Engineering, Electrical Engineering). Integrated densers on				
and Microcomputer	Spatially Resolved	Absortion Spectrometer for Membrane Studies	EQP	\$	22,406	NSERC
Co-investigator with Baltes, H P (Engineering, Electrical Engineering): Organic Film Preparation for Integrated Sub-contract: To Evaluate Ion-selective Field Effect Transistors CTR \$ 7,140 UVIC Hepler, L G Thermodynamics and Colloid Science Applied to Oil Sands Chemical Thermodynamics OPR \$ 50,879 NSERC Hindsgaul, O Biological Functions of Complex Carbohydrates Medium-Pressure Chromatography System EQP \$ 19,200 NSERC Co-investigator with Jordan, R B: Alberta High Field NMR Centre Development of ELISA Assays for Glycosyltransferases Co-investigator with Kotovych, G: Upgrade of the 400 MHz High-field Hogg, A M Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Horlick, G Development and Application of Methods and Systems for Spectrochemical Analysis Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Huzinaga, S Support of Symposium on Computational Chemistry and Parallel Processors OPR \$ 4,000 ATRT Computational Study of Electronic Properties of Molecules OPR \$ 41,279 NSERC Jordan, R B Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer Kebarle, P Gas Phase Ion Chemistry - Relationships With Ions in Solution Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules OPR \$ 12,000 ACS Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 21,120 NSERC						
Preparation for Integrated Sub-contract: To Evaluate Ion-selective Field Effect Transistors CTR \$ 7,140 UVIC Hepler, L G Thermodynamics and Colloid Science Applied to Oil Sands CTR \$ 117,180 AOSTR Chemical Thermodynamics OPR \$ 10,200 NSERC Hindsgaul, O Biological Functions of Complex Carbohydrates OPR \$ 19,200 NSERC Medium-Pressure Chromatography System EQP \$ 16,525 NSERC Co-investigator with Jordan, R B: Alberta High Field NMR Centre Development of ELISA Assays for Glycosyltransferases OPR \$ 42,400 NSERC Co-investigator with Kotovych, G: Upgrade of the 400 MHz High-field Hogg, A M Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Horlick, G Development and Application of Methods and Systems for Spectrochemical Analysis OPR \$ 54,883 NSERC Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Huzinaga, S Support of Symposium on Computational Chemistry and Parallel Processors OPR \$ 4,000 ATRT Computational Study of Electronic Properties of Molecules OPR \$ 41,279 NSERC Jigand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes OPR \$ 42,264 NSERC Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer OPR \$ 11,847 NSERC Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules OPR \$ 12,000 ACS Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 11,200 NSERC Nopecky, K R	•	· ·	OPR	\$	25,000	NSERC
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Biological Functions of Complex Carbohydrates Medium-Pressure Chromatography System Development of ELISA Assays for Glycosyltransferases OPR \$ 16,525 NSERC Co-investigator with Jordan, R B: Alberta High Field NMR Centre Development of ELISA Assays for Glycosyltransferases OPR \$ 42,400 NSERC Co-investigator with Kotovych, G: Upgrade of the 400 MHz High-field Hogg, A M Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Horlick, G Development and Application of Methods and Systems for Spectrochemical Analysis Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Huzinaga, S Support of Symposium on Computational Chemistry and Parallel Processors OPR \$ 4,000 ATRT Computational Study of Electronic Properties of Molecules Jordan, R B Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer Kebarle, P Gas Phase Ion Chemistry - Relationships With Ions in Solution Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules OPR \$ 12,000 ACS Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 12,000 NSERC		dynamics	OPR	\$	50,879	NSERC
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Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Horlick, G Development and Application of Methods and Systems for Spectrochemical Analysis Co-investigator with Kebarle, P: Instrumental and Analytical Methodology Huzinaga, S Support of Symposium on Computational Chemistry and Parallel Processors Computational Study of Electronic Properties of Molecules Jordan, R B Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer Kebarle, P Gas Phase Ion Chemistry - Relationships With Ions in Solution Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules OPR \$ 12,000 ACS Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 21,120 NSERC		th Kotovych, G: Upgrade of the 400 MHz High-field				
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Support of Symposium on Computational Chemistry and Parallel Processors Computational Study of Electronic Properties of Molecules Jordan, R B Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer Kebarle, P Gas Phase Ion Chemistry - Relationships With Ions in Solution Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules Kopecky, K R		th Kebarle, P: Instrumental and Analytical Methodology				
Computational Study of Electronic Properties of Molecules Jordan, R B Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer Kebarle, P Gas Phase Ion Chemistry - Relationships With Ions in Solution Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 11,279 NSERC NSERC OPR \$ 11,847 NSERC NSERC OPR \$ 106,241 NSERC OPR \$ 202,080 NSERC OPR \$ 12,000 ACS Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 21,120 NSERC		sium on Computational Chemistry and Parallel Processors	OPR	\$	4,000	ATRT
Ligand Substitution and Electron Transfer Mechanisms of Transition Metal Complexes Alberta High Field NMR Centre Kalantar, A H Triplet State Spectroscopy, Kinetics and Energy Transfer Gas Phase Ion Chemistry - Relationships With Ions in Solution Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 42,264 NSERC NSERC VOPR \$ 11,847 NSERC NSERC OPR \$ 106,241 NSERC NSERC OPR \$ 12,000 ACS Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 21,120 NSERC			OPR	\$	41,279	NSERC
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Instrumental and Analytical Methodology Development of the SCIEX TAGA 6000 Mass Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules Kopecky, K R		nemistry - Relationships With lons in Solution	OPR	\$	106 241	NSERC
Spectrometer Keil, M Energy Disposal in the Photodissociation of van der Waals Molecules Inter-and Intra-molecular Energy Transfer, Reactions of Weakly-Bound Molecules OPR \$ 12,000 ACS OPR \$ 21,120 NSERC Kopecky, K R		· · · · · · · · · · · · · · · · · · ·				
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Kopecky, K R						
		needial Energy Transier, Heactions of Weakly-Double Wolecoles	Or 11	Ψ	۷,۱۷۷	NOLITO
		uminescence, Orbital Interactions, Ester Hydrolysis and Polymerization	OPR	\$	18,554	NSERC

Investigator	Proje	et Title	9		Award		Amount	Agency
Kotovych, G								
	MR Studies of Biologica	I Syst	ems		OPR	\$	21,120	NSERC
_	or with Jordan, R B: All			entre			,	
Co-investigat	or with Kotovych, G: U	grade	e of the 400 MHz H	ligh-field				
	ne 400 MHz High-field I	MR (Cryospectrometer		EQP	\$	283,350	NSERC
Kratochvil, B	Homogeneity of Freez	a-Drie	d Marine Sedimer	t Reference Material	CTR	\$	21,650	NRC
	g and Ion Speciation M				OPR	\$	39,359	NSERC
Lemieux, R U				, 00		-		
	cognition at the Molecu				OPR	\$	117,720	NSERC
-	or with Jordan, R B: All		•					
Liu, H J	or with Kotovych, G: U	grade	or the 400 MHz F	nign-riela				
	ent of Organic Synthet	c Met	hods. (2) Synthetic	Studies on Natural Products.	OPR	\$	42,239	NSERC
	or with Jordan, R B: All	erta I	High Field NMR Ce	entre				
Lown, J W	on of Antitumor Antibiot	00			OPR	Ф	67,863	NCI
	ce Specific Anticancer		ntiviral Agents		OPR	\$ \$	67,000	NSERC
·	or with Kotovych, G: U		~	liah-field	Oitt	Ψ	07,000	NOLITO
_		_		yclic and Antibiotic Chemistry	OPR	\$	67,038	NSERC
-	sm of Antitumor Action			,	OPR	\$	39,298	USNIH
McClung, R E D			/ 400 MILL I					
•	or with Kotovych, G: Up	_	of the 400 MHz F	ligh-field	ODD	Φ	07.040	NCEBO
	onal NMR Spectroscop or with Jordan, R B: All	-	High Field NMR Co	ontro	OPR	\$	27,840	NSERC
Nakashima, T T	orwith Sordan, It D. All	ocita i	ngii i leia ivivii i ce	51111 0				
Co-investigat	or with Kotovych, G: U	grade	of the 400 MHz H	ligh-field				
Robins, M J	Related to Nucleic Acid				OPR	\$	67 949	NCEDO
Strausz, O P	helated to Nucleic Acid	5			OFN	Ф	67,842	NSERC
	Sulfur in Alberta Crude	Dils, a	s Related to Produ	uction, Upgrading, and Oxidation	CTR	\$	85,000	AOSTR
		ent in .	Athabasca Bitume	n and the Cretaceous Heavy	CTR	\$	75,000	AOSTR
Oils of Alberta			D-l-4- d 4- d-	The second Observation	OTD	Φ.	470.000	ACCED
	dies on Hesins and As i Oil Production	onaite	nes Helated to the	Thermal Changes Occurring	CTR	\$	170,000	AOSTR
-	Studies in Petroleum,	Free F	Radical- and Photo	chemistry	OPR	\$	43,200	NSERC
	or with Crawford, R J: I					•	10,200	
Takats, J				•				
•	lic Complexes of the Tr				OPR	\$	33,600	NSERC
	or with Kotovych, G: Up or with Jordan, R B: All	-		•				
-	or with Graham, W A G		-					
Tanner, D D	or with Granam, w A C	. 1 001	iei mansionii iini	area opecitorneter				
	amagnetic Resonance S	•			EQP	\$	114,580	NSERC
	e Mechanism of Free F				OPR	\$	41,280	NSERC
Co-investigat Thorson, W R	or with Crawford, R J: I	/lass :	Spectrometry Serv	ice Laboratory				
	eoretical Chemistry: (1	Atom	ic Collision Theor	(2) Vibrational Dynamics	OPR	\$	32,640	NSERC
Vederas, J C	•					•	,-	
	or with Kotovych, G: Up	_		-				
•	or with Crawford, R J: I	/lass :	Spectrometry Serv	ice Laboratory	EQD.	æ	10 E00	NCEDO
Freeze-drying	-	Micro	hiology): Technics	Il Support for Fermentation	EQP	\$	16,502	NSERC
_	of With Westlake, D W If Polyketide Biosynthes		biology). Technica	a Support for Fermentation	OPR	\$	40,319	NSERC
	or with Jordan, R B: All		High Field NMR Co	entre	0, 1,	Ψ	40,010	NOLINO
Weir, G L								
Co-investigat	or with Armour, M A: R	ecycli	ng and Disposal of	Chemical				
Type of Awa	ard No)	Amount	Source of Funds	No.		Amount	
Contracts		9 \$	642,085	NSERC	51	\$	2,609,678	
Equipment		7 \$	552,263	Other Provincial	9	\$	599,472	
Infrastructure Operating	4	2 \$ 9 \$	67,200 2,043,078	Other Federal Other Agencies	3 6	\$ \$	130,250 215,906	
Technology T		э ф 2 \$	250,680	Total	69	φ \$	3,555,306	
10011101041		- +	200,000	. 0 ta.			-,,	

Department of Computing Scien

Investi	gator	Project Title	e		Award		Amount	Agency
Armsti	rong, W W							
	Miscellaneous Experiments in				OPR	\$	18,197	NSERC
	Co-investigator with Marsland							
Cabay	Co-investigator with Green, M	I W: Motion I	Display Laboratory					
Cabay	Algebraic Algorithms				OPR	\$	11,950	NSERC
	Co-investigator with Marsland	I. T A: Distrib	outed Computing R	research		*	, • • •	
Chan,		., , , , , , , ,						
	Schema Analysis Under the V	Veak Instand	e Model		OPR	\$	14,484	NSERC
Culber	rson, J C The Effect of Deletions and In	oortions on	Coarab Troop		OPR	\$	15,000	NSERC
Davis,	The Effect of Deletions and In	isertions on .	Search frees		OFN	Φ	15,000	NOENC
541.0,	Co-investigator with Marsland	I, T A: Distrib	outed Computing F	Research				
	Digital Techniques in Image F		, -		OPR	\$	22,940	NSERC
Dobos	iewicz, W					_		
CK- D	Design of Fast Alogrithms for	Search Tree	Manipulation		OPR	\$	12,285	NSERC
Elio, R	thterdisciplinary Research on	Knowledge-	hased Systems Re	enresentations	OPR	\$	19,000	NSERC
	Co-investigator with Marsland	_	•	•	Orn	Ψ	13,500	NOLITO
Green	. M W	i, i A. Distric	died Compating i	iescarcii				
	User Interfaces and Compute	r Animation			OPR	\$	17,997	NSERC
	Co-investigator with Marsland	l, T A: Distrib	outed Computing F	Research				
	Motion Display Laboratory				EQP	\$	65,207	NSERC
Marsia	ind, T.A				0.00	•	20 505	NOTES
	Distributed Systems Studies			-	OPR	\$	29,535	NSERC
	Co-investigator with Schaeffe		on of Facilities for	Experimenting	18.15	•	00.040	NOEDO
Ozsu,	Distributed Computing Resea	rcn Group			INF	\$	66,240	NSERC
Ozsu,	Analysis and Design of Distrik	outed Databa	ase Systems. Oper	rating System Support for	OPR	\$	13,797	NSERC
	Distributed Databases			2 cycles a cycle		*	-,	
	Co-investigator with Marsland	l, T A: Distrib	outed Computing F	Research				
Pelleti					000			
	Natural Language Understand	-		=	OPR	\$	17,280	NSERC
Schae	Co-investigator with Marsland	i, I A: Distrit	outed Computing F	Research				
Scriae	Tree Searching on a Multi-Pro	ocessor Syst	em		OPR	\$	17,000	NSERC
	Expansion of Facilities for Exp	-		ams	EQP	\$	15,981	NSERC
Schub	ert, L K	,				•	,	
	Language Understanding, Qu				OPR	\$	25,066	NSERC
	Co-investigator with Marsland	d, TA: Distrib	outed Computing F	Research				
Szatro	on, D A The Effects of Graphical User	r Interference	n Brogramming E	nvironmente	OPR	\$	10,000	NSERC
	Co-investigator with Marsland				OFR	Ψ	10,000	NOLHO
Tartar		i, i A. Distrit	buted Computing r	iesearch				
	Investigation of Interactive an	d Distributed	d Computer Systen	ns	OPR	\$	25,406	NSERC
	Co-investigator with Marsland	d, T A: Distrib	outed Computing F	Research				
White,						_		
	Research in Computer Progra	_		_	OPR	\$	27,950	NSERC
	Co-investigator with Marsland	d, I A: Distrit	outed Computing F	Research				
	Type of Award	No.	Amount	Source of Funds	No.		Amount	
	Equipment	2 \$		NSERC	19	\$	445,315	
	Infrastructure	1 \$						
	Operating Total	16 \$ 19 \$	· ·					
	i Otal	ן פו	770,010					

Investigator	Project	Title			Award		Amount	Agency
Ahmed, A	<u> </u>							
	A Transposition in E	Coli			OPR	\$	34,656	NSERC
Bell, J B	ational Supressors in	Droc	conhila malanaa	aster and tRNA Nucleoside	OPR	\$	20,000	NSERC
	ient Mutants in Saccl				OFN	Φ	20,000	NOLITO
Hastings, P J	ioni Midianto III Gadoi	14.011	1,000 0010110100	•				
Répair, Spontane	ous Mutation and Re	comb	ination in Yeast		OPR	\$	34,464	NSERC
Hodgetts, R B						_		
	f the Response to Se			-	OPR	\$	16,000	AART
	s of the Regulation of	Gene	e Expression in	Drosophila	OPR	\$	32,544	NSERC
Kuspira, J	es of the A Genome	in Trit	icum		OPR	\$	20,301	NSERC
Morgan, K	es of the A deficitie	Orn	Ψ	20,301	NOLITO			
• ,	ation and Genealogic	cal St	ructure: Multiple	e-locus Associations,	OPR	\$	7,977	NSERC
Segregation, and	Gene Descent		·			•	•	
Nargang, F E								
J	` •		• • • • • • • • • • • • • • • • • • • •	ic Variation and Adaptation	000	•	00.400	NOFF
Mitochondrial Ger Nash, D	e Expression in Neu		OPR	\$	29,438	NSERC		
•	cular Studies on Gen	Metabolism in Drosophila	OPR	\$	39,360	NSERC		
Reha-Krantz, L J	balar oldalos en den	03 / 11	locking i dime iv	iotabolisti iii biosopiliia	0	Ψ	00,000	1102110
	th Westlake, DW (M	icrobi	ology): Technic	al Support for Fermentation				
Studies on the Bio	Studies on the Biochemical Basis of Mutation						29,760	NSERC
Russell, M A						_		
	f Developmental Path	iways	in Drosophila		OPR	\$	32,640	NSERC
Tyler, J M Molecular Cloning	and Analysis of Hun	nan F	rythrocyte Spec	trin	OPR	\$	10,375	MRC
von Borstel, R C	and Analysis of Hull	iaii L	Tytinocyte opec		Oili	Ψ	10,575	IVII 10
	Conference on Yeas	t Ger	etics, to be held	in Banff, Alberta, Aug 31-Sep	CFC	\$	30,000	AHFMR
9/86				- ,				
Origin of Spontan	eous Mutations				OPR	\$	46,560	NSERC
13th International	Conference on Yeas	t Ger	etics and Molec	cular Biology Banff, Alberta	CFC	\$	6,000	NSERC
Molecular Analysi	s of Mutation Spectra	ı Indu	ced by "Nonmu	tagenic" Carcinogens and	OPR	\$	73,912	NSERC
Alkylating Agents								
Weijer, J	of Native Grasses 86	Dono	arah Cantraat V	Mostorn Rogian	CTR	Φ	24.000	DINA
Seed Froduction (of Native Grasses of	nese	arch Contract v	vestern Region	CIR	\$	34,800	DINA
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	2	\$	36,000	AHFMR	1	\$	30,000	
Contracts	1	\$	34,800	MRC	1	\$	10,375	
Operating	14	\$	427,987	NSERC	13	\$	407,612	
Total	17	\$	498,787	Other Provincial	1	\$	16,000	
				Other Federal	1	\$	34,800	
				Total	17	\$	498,787	

Department of Geography

Investig	nator Project Title	Award	Amount	Agency
Campb	ell, I A			
-	Erosion Rates, Sediment Delivery Ratios and the Evolution of the Red Deer Badlands	OPR	\$ 12,480	NSERC
Englan	d, J			
	Climatic and Environmental Change in the Canadian High Arctic	CTR	\$ 14,445	EC
	Quaternary Glaciation, Glacio-Isostasy and Paleoenvironmental Change, Northern Ellesmere Island	OPR	\$ 23,040	NSERC
Eyton,	R			
	Co-investigator with Muller, J C: Digital Terrain Modelling Techniques			
Kersha	,			
	Studies of Environmental Effects of Disturbances in the Subarctic (SEEDS)	CTR	\$ 39,143	AGCA
Lozows	ski, E P			
•	The vertical gradient of sea spray concentration	OPR	\$ 9,992	EC
	lcing Research for Marine Applications	OPR	\$ 19,920	NSERC
	Co-investigator with Gates, E M (Engineering, Mechanical Engineering): Marine Icing			
Muller,				
	Digital Terrain Modelling Techniques and Fractal Dimension	OPR	\$ 24,000	NSERC

Investigator	Project Tit	le		Award		Amount	Agency
Behaviour in West-Co Universities in Forest	entral and Northern	neric Conditions R Canada - Part of tl	Related to Extreme Forest Fire he Program of Research by	CTR	\$	15,168	AGCA
Wilson, J D Co-investigator with t Flow Through a Shelt		ertical gradient of	sea spray	OPR	\$	14,000	NSERC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts Operating Total	3 9 6 9 9 \$	103,432	NSERC Other Federal Total	5 4 9	\$ \$	93,440 78,748 172,188	
Department of Geolog							
Investigator	Project Tit	le		Award		Amount	Agency
and Potash Salt Depo	Selected Crustal Are		pecimens rizons, Uranium Mineralisation	CTR OPR	\$ \$	11,835 41,280	DINA NSERC
Burwash, R A Western Canada Bas Chamberlain, V E	sin Heat Generation	Data Base		OPR	\$	5,500	EMRC
	nagnetically Analyse	d Early Proterozoi	ic Rocks of the Slave Province	OPR	\$	3,500	EMRC
Conodont Biostratigra Subsurface Equivaler	OPR	\$	5,500	EMRC			
Taxonomic, Paleoecc	OPR	\$	27,840	NSERC			
Systematics, Biostrat Trilobites and Conodo	OPR	\$	6,100	NSERC			
The Stability of Natur	OPR	\$	28,800	NSERC			
Erdmer, P Tectonic and Geochro Newfoundland	CTR	\$	19,434	EMRC			
Northern Supplement Central Yukon			anes of Central Yukon s of Allochthonous Terranes of	OPR OPR	\$ \$	11,520 6,500	NSERC NSERC
Fox, R C Upper Cretaceous an Hein, F J	nd Paleocene Tetrap	ods from Western	Canada	OPR	\$	39,446	NSERC
Basin Analysis: Shelf Johnston, D I	and Slope Deposits	, Active and Passi	-	OPR	\$	14,600	NSERC
Jones, B		-	phy and Paleoecology				
Diagenetic Regimes A				OPR	\$	34,066	NSERC
Isotopic Studies Rela Longstaffe, F J				OPR	\$	34,066	NSERC
Diagenesis Study of I			•	OPR	\$	5,000	CHEL
			I to These Analyses - Mr G Lynch nentary Rocks due to Fluid Mixing	CTR OPR	\$ \$	20,000 8,000	DINA IOL
Physicochemical Inve				OPR	\$ \$	35,606	NSERC
Morton, R D Co-investigator with S	Smith, D.G.W: Econo	omic Geology Eval	luations of				
			Uranium Deposit, Saskatchewan	OPR	\$	11,680	NSERC
	Program - Isotopic	Studies on Coal-B	itumen Co-processing Schemes	OPR	\$	31,000	AENR
Oxygen Isotope Anal	= "			CTR	\$	4,960	EMRC
Distillates and Residu	ues by Isotopic Mass	Balance Calculat		CTR	\$	3,000	EMRC
Stable Isotope Excha Co-investigator with S				OPR	\$	26,400	NSERC

Investigator	Project Title			Award		Amount	Agency	
Nesbitt, B E								
Evaluation of the Origin of M	lesothermal Gold	l-Quartz Veins	of the Canadian Cordillera	OPR	\$	7,000	EMRC	
Metamorphism and Genesis	of Base and Pre	cious Metal De	posits	OPR	\$	16,800	NSERC	
Pemberton, S G Ichnological Microdynamics	of the Athabasca	Oil Sands: An	Integrated Surface and	CTR	\$	60,234	AOSTR	
Subsurface Study Ichonology of the Precambri	an-Cambrian Bo	undary: The Mi	ette - Gog Transition Mount	OPR	\$	6,000	EMRC	
Robson Area Ichnology of Storm and Tida	I Dominated Seq	uences		OPR	\$	24,000	NSERC	
Rutter, N W Geochronological Analysis of	of Beaufort Sea F	Region Sedimen	nt Samples	CTR	\$	62,298	EMRC	
,		•	Wood from the Timmins Area	CTR	\$	3,900	EMRC	
Amino Acid Dating Technique		•		OPR	\$	36,000	NSERC	
Scarfe, C M	.		0 1 11 1 T	0.75	•			
		•	Solutions at High Temperatures	CTR	\$	37,865	AOSTR	
Physical and Chemical Prop			_	OPR EQP	\$ \$	25,440 521,899	NSERC NSERC	
Schwartz, F W	High-pressure Apparatus for Research in Geochemistry and Geophysics							
Development and Applicatio	n of an Expert Sy	ystem in Contar	minant Hydrogeology	OPR	\$	7,400	AERT	
Exchange Processes and M	ass Transport in	Groundwater S	ystems	OPR	\$	38,400	NSERC	
Smith, D G W	mith, D G W Economic Geology Evaluations of the N-81 Orebody, Pine Point Mines Ltd							
——————————————————————————————————————				CTR	\$	10,000	DINA	
Applications of the Electron Search for Meteorites on Ca	•		logy and Meteoritics	OPR OPR	\$ \$	40,800 2,000	NSERC NSERC	
Co-investigator with Egertor		•	lectron Microscopo	OFN	Ф	2,000	NOENC	
Toth, J	i, n r (riiysics).	Hansilission L	lectron Microscope					
Development of a Hydrogeo	logical Approach	to Petroleum E	Exploration	OPR	\$	105,020	NSERC	
Type of Award	No.	Amount	Source of Funds	No.		Amount		
Contracts	10 \$	233,527	NSERC	22	\$	1,128,263		
Equipment	1 \$	521,899	Other Provincial	4	\$	136,499		
Operating Total	30 \$ 41 \$	685,264 1,440,690	Other Federal Other Agencies	13 2	\$ \$	162,928 13,000		
	•	-,,	Total	41	\$	1,440,690		
Department of the solution								
Department of Linguistics								
Investigator	Project Title			Award		Amount	Agency	
Dryer, M S A Statistical Study of Word C Nearey, T M	Order Universals			OPR	\$	4,520	SSHRC	
			search environment (with D G	OPR			NSERC	
Voicing Contrasts in French	,			OPR	\$	7,657	SSHRC	
Rochet, B Co-investigator with Nearey	, T M: Voicing Co	ontrasts in Fren	ch and					
Operating			SSHRC	2	\$	12,177		
operating			COMIC	_	Ψ	12,177		
Department of Mathematic								
Investigator	Project Title			Award		Amount	Agency	
Abbott, H L Extremal Problems in Numb	er Theory and C	ombinatorics		OPR	\$	11,185	NSERC	
Aiello, W Co-investigator with Antone	lli, P L: Personal	Computer - SU	N-3/52 plus					
Al-Salam, W		·	·	OPR	\$	17,856		
_	Sieved Orthogonal Polynomials, Basic Series, Geronimus Orthogonal Polynomials						NSERC	
Constructive Function Theo	ry'86, University	of Alberta		CFC	\$	9,060	NSERC	
Allegretto, W Behaviour of the Solutions a	and of the Spectr	um of Differenti	al Operators	OPR	\$	15,325	NSERC	
Allison, B N Nonassociative Algebras an	•		•	OPR	\$	8,035	NSERC	
. isaccodiante / ngobias an	000		0.71	Ψ	5,000			

Investigator	Project Title	Award		Amount	Agency
Andersen, K F					
Weighted Inequ	ualities for Integral Operators	OPR	\$	5,747	NSERC
Antonelli, P L Some Problem	s in Population Biology and Physics	OPR	\$	12,934	NSERC
	buter - SUN-3/52 plus Printer (i.e. SUN-3/50 plus External 71MB.Disc and with Floating Point accitr)	EQP	\$	17,000	NSERC
Brungs, H H	with Hoating Fortt accity				
Chain Rings Butler, G J		OPR	\$	8,621	NSERC
Mathematical N	Models of Ecosystems; Oscillation Theory; Bifurcation Theory	OPR	\$	18,641	NSERC
Cliff, G Group Rings ar	nd their Representations	OPR	\$	8,035	NSERC
Ditzian, Z Moduli of Smoo	othness, K-functional and Rate of Approximation	OPR	\$	18,641	NSERC
	with Al-Salam, W: Constructive Function Theory'86,	0	*	10,011	1102110
Erbe, L H Oscillation The	ory and Boundary Value Problems	OPR	\$	19,157	NSERC
Fields, J L			·	,	
Freedman, H I	symptotic Approximations	OPR	\$	3,728	NSERC
Periodicity, Sta	bility, and Population Ecology	OPR	\$	12,454	NSERC
Implicative Sen	nilattices	OPR	\$	5,357	NSERC
Kharaghani, H The Excess of	Hadamard Matrices	OPR	\$	5,000	NSERC
Klamkin, M S	Andalling, Geometric Inequalities	OPR	\$	6,517	NSERC
Kunzle, H P	Modelling, Geometric Inequalities				
Relativistic Ver	sus Nonrelativistic Classical Physical Theories	OPR	\$	7,296	NSERC
Subspaces of t	he Left Regular Representation and Amenability	OPR	\$	15,325	NSERC
Liu, C F A Extremal Problem	ems in Hypergraphs and Geometry	OPR	\$	5,747	NSERC
Ludwig, G Exact Solutions	s in General Relativity	OPR	\$	5,747	NSERC
Macki, J W					
for ODE.	Nonsmooth Analysis in Control Theory & Game Theory/Qualitative Theory	OPR	\$	5,592	NSERC
Meir, A	pline Approximation (2) Average Branch Size of Rooted Trees	OPR	\$	20,505	NSERC
Millar, R F	· · · · · · · · · · · · · · · · · · ·		•		
The Rayleigh F Moodie, T B	Hypothesis and Inverse Scattering for the Helmholtz Equation	OPR	\$	8,035	NSERC
Linear and Nor	nlinear Waves in Haemodynamics, Fracture, and Thermoelasticity	OPR	\$	18,749	NSERC
Research in G	raph Theory	OPR	\$	2,208	NSERC
Muldowney, J S Qualitative The	eory of Differential Equations	OPR	\$	6,174	NSERC
Oguztoreli, M N	lysis and Simulation of Certain Scientific and Industrial Problems	OPR	\$	12,480	NSERC
Pounder, J R			·		
Stability Study Rhemtulla, A H	of Nonlinear Recurrence Relations	OPR	\$	2,500	NSERC
Groups of Finit		OPR	\$	15,325	NSERC
Riemenschneider, S Approximation	of Functions of One and Several Variables	OPR	\$	18,641	NSERC
	r with Al-Salam, W: Constructive Function Theory'86,				
Rogers, T D Discrete Dynar	mical Systems	OPR	\$	7,142	NSERC
Sabbarao, M V	nmetic Functions and Partition Theoretic Problems	OPR	\$	14,285	NSERC
Scherk, J			·		
Invariants of Is Sehgal, S K	olated Singularities	OPR	\$	434	NSERC
Studies in Grou	up Rings	OPR	\$	22,080	NSERC
Cardinal Spline	e Interpolation and Interpolatory Function Theory	OPR	\$	23,301	NSERC
Tait, R J Fluid Flow in L	inear and Nonlinear Elastic and Viscoelastic Tubes	OPR	\$	14,285	NSERC
,				,	-

Investigator	Project	Title			Award		Amount	Agency
Γimourian, J G								
,	and Partial Different	ial Ed	uations		OPR	\$	10,714	NSERC
Tomczak-Jaegermann, I						_		
-	merical Characteristic	cs of I	Banach Spaces	3	OPR	\$	15,325	NSERC
Weiss, A R		ODD	Φ	0.000	NCEDO			
(1) Arithmetic of S	per Fielas	OPR	\$	9,600	NSERC			
Wolkowicz, H Numerical Solutions of Ill-posed Problems						\$	195	NSERC
Wong, Y S						Ψ	100	1102110
	id Dynamics: High-o	rder N	Numerical Soluti	ions for Partial Differential	OPR	\$	9,648	NSERC
Equations	,							
Zeidan, V								
	ıfficient Conditions fo	r Opti	imization and G	ieneral Control Problems	OPR	\$	9,388	NSERC
Zizler, V	/ D		A 15 .5		OBB	•	44.405	NOEDO
Renorming Theory	y of Banach Spaces	and it	s Applications		OPR	\$	11,185	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	9,060	NSERC	45	\$	495,199	
Equipment	1	\$	17,000					
Operating	43	\$	469,139					
Total	45	\$	495,199					

Department of Microbiology

Investigator	Project Title	Award		Amount	Agency
Fedorak, P M					
Attenuation of (Cyanide Toxicity Prior to Methanogenic Treatment of Phenolic Wastewaters	OPR	\$	8,000	IOL
Co-investigator in	with Huck, P M (Engineering, Civil Engineering): Use of Biological Processes				
Co-investigator Enhancing	with Hrudey, S E (Engineering, Civil Engineering): Role of Support Media in				
Co-investigator BioTechnology	with Hrudey, S E (Engineering, Civil Engineering): Environmental Process				
Anaerobic Deg	radation of m-cresol by a Methanogenic Consortium	OPR	\$	13,440	NSERC
Jensen, S E					
•	with Westlake, D W: Collaborative Study with Dr. Wolfe,		_		
	Beta Lactam Antibiotics in Streptomyces clavuligerus	OPR	\$	27,696	NSERC
=	with Westlake, D W: Technical Support for Fermentation				
	quid Chromatograph	EQP	\$	36,947	NSERC
Page, W J	donum Acquimulation in Azətabaştar vinalandii	OPR	\$	35,438	NSERC
	denum Accumulation in Azotobacter vinelandii	OFN	Φ	35,436	NOENU
Pickard, M A	with Westlake, D W: Technical Support for Fermentation				
•	r with Dederich, D N (Dentistry, Restorative Dentistry): Laser Applications in				
Co-investigator	r with Westlake, D W: Editorial Support Services - To				
Co-investigator	with Westlake, D.W. Technical Support for Fermentation				
Fungal Metabo	lites of Applied Potential	OPR	\$	22,260	NSERC
Roy, K L J					
Cloned Human	tRNA Genes	OPR	\$	20,160	NSERC
Stemke, G W	of a Consideration for Densira Manager and Densiration	000	•	44 505	A DO A
Taylor, D E	of a Serodiagnosis for Porcine Mycoplasmal Pneumonia	OPR	\$	41,525	ARCA
• •	s of Campylobacters with Special Reference to Mechanisms of Tetracycline cin Resistance	OPR	\$	33,438	NSERC
Cloning of Can	npylobacter jejuni Genes for Use as Diagnostic DNA Probes	OPR	\$	41,120	NSERC
von Tigerstrom, R G	· · · · · ·			,	
RNA-Degradin	g Enzymes in Yeast. Extracellular Products of Lysobacter	OPR	\$	21,452	NSERC

estlake, D W	Project Ti	ile		Award		Amount	Agency
Unemcumbered Grant i	to be Used in Der	artmental Resear	rch Program	OPR	\$	6,000	CHEM
	•		_	_		•	
			Support Services and Incidental	CTR	\$	50,000	NRC
		e and Dr M A Pick	kard as Editors of the Canadian				
Journal of Microbiology							
Co-investigator with Cra	awford, R J (Cher	nistry): Mass Sped	ctrometry Service Laboratory				
Collaborative Study wit	h Dr. Wolfe, Quee	n's University: Mi	crobiological Syntheses of Novel	OPR			NSERC
Beta-Lactam Compoun	ids - \$101,840 (Ur	niversity of Alberta	a \$30,000.)				
-		•	ogical Research Station				
_		* *	•				
Co-investigator with Jer		•	matograph				
Technical Support for F				INF	\$	22,080	NSERC
Microbial Metabolism of	f Natural Products	;		OPR	\$	57,062	NSERC
Type of Award	A1-	A	Saures of Funds	A/-		4	
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts	1 :	\$ 50,000	NSERC	11	\$	331,093	
Equipment	1 :	\$ 36,947	Other Provincial	1	\$	41,525	
Infrastructure		\$ 22,080	Other Federal	1	\$	50,000	
Operating		\$ 327,591	Other Agencies	2	\$	14,000	
Total	15	\$ 436,618	Total	15	\$	436,618	
epartment of Physics	3						
vestigator	Project Ti	tle		Award		Amount	Agency
begg, R							
Co-investigator with Hu	itcheon, DA: Neu	tron Capture at 0	Degrees				
Co-investigator with Gre		•	-				
Co-investigator with Hu			· ·				
dier, J G	itcheon, D.A. Pola	JIZALION HANSIELI	to Deuteron				
Electron Tunneling Spe	actroscopy			OPR	\$	45,408	NSERC
ameron, J M	спозсору			Orit	Ψ	43,400	NOLITO
Co-investigator with Ro	v G: Determinati	on Of The Douter	on Charge				
_	-		-	050	Φ	0.000	NOCEDO
Winter Institute on Elec			rebruary 15-21, 1987	CFC	\$	9,000	NSERC
University of Alberta-TF	RIUMF Research-	Support Staff		OPR	\$	368,845	NSERC
Determination of the De	euteron Charge F	orm Factor Using	a Deuteron Tensor Polarimeter	OPR	\$	153,686	NSERC
Co-investigator with Sh	eppard, D.M. Q-N	Measurement on 4	0Ca at 1 GeV				
_	• •						
Co. invoctigator with Mo		and Photon Induc	and Popotion				
Co-investigator with Mo	-	· -					
Co-investigator with Hu	-	· -					
Co-investigator with Hu	itcheon, D A: Neu	· -				.=	
Co-investigator with Hu ampbell, B A Superunification and So	itcheon, D A: Neu	· -		OPR	\$	17,000	NSERC
Co-investigator with Hu ampbell, B A Superunification and So apri, A Z	utcheon, D A: Neu	· -			·	•	
Co-investigator with Hu ampbell, B A Superunification and Si apri, A Z Solutions in Quantum F	utcheon, D A: Neu	· -		OPR OPR	\$	17,000 19,100	NSERC NSERC
Co-investigator with Hu ampbell, B A Superunification and St apri, A Z Solutions in Quantum F umming, G L	utcheon, D A: Neu uperstrings Field Theory	tron Capture at 0	Degrees	OPR	\$	19,100	NSERC
Co-investigator with Hu ampbell, B A Superunification and St apri, A Z Solutions in Quantum F umming, G L Inst of Earth & Planetar	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppi	tron Capture at 0	Degrees ed Visitors and Faculty Support for		·	•	NSERC
Co-investigator with Hu ampbell, B A Superunification and St apri, A Z Solutions in Quantum F umming, G L Inst of Earth & Planetar Specific Research and	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppi	tron Capture at 0	Degrees	OPR	\$	19,100	NSERC
Co-investigator with Hu ampbell, B A Superunification and St apri, A Z Solutions in Quantum F umming, G L Inst of Earth & Planetar	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppi	tron Capture at 0	Degrees ed Visitors and Faculty Support for	OPR	\$	19,100	NSERC
Co-investigator with Huampbell, B A Superunification and Suapri, A Z Solutions in Quantum Fumming, G L Inst of Earth & Planetar Specific Research and Techniques	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel	tron Capture at 0 ort for Distinguisheopment - Seismic	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling	OPR	\$	19,100	NSERC
Co-investigator with Huampbell, B A Superunification and Suapri, A Z Solutions in Quantum Fumming, G L Inst of Earth & Planetar Specific Research and Techniques	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel osts of the Edmon	tron Capture at 0 ort for Distinguisheopment - Seismic ton Standard Seis	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling	OPR OPR	\$	19,100	NSERC
Co-investigator with Hu ampbell, B A Superunification and So apri, A Z Solutions in Quantum F amming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel osts of the Edmon nergy, Mines and	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling amograph Station of the Canadian tmental Award	OPR OPR	\$ \$ \$	19,100 10,000 17,000	NSERC AMOCC EMRC
Co-investigator with Hu ampbell, B A Superunification and Sa apri, A Z Solutions in Quantum F amming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel osts of the Edmon nergy, Mines and	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling amograph Station of the Canadian tmental Award	OPR OPR	\$	19,100	NSERC
Co-investigator with Hu Impbell, B A Superunification and So Ipri, A Z Solutions in Quantum F Imming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel osts of the Edmon nergy, Mines and opic Variations in	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling amograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR	\$ \$ \$ \$	19,100 10,000 17,000 36,346	NSERC AMOCO EMRC NSERC
Co-investigator with Hu Impbell, B A Superunification and Superi, A Z Solutions in Quantum F Imming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto Ierton, R F Electron Energy-loss S	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel losts of the Edmon nergy, Mines and opic Variations in a spectrometry and a	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling amograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR OPR	\$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800	NSERC AMOCO EMRC NSERC NSERC
Co-investigator with Hu Impbell, B A Superunification and Superi, A Z Solutions in Quantum F Imming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto Ierton, R F Electron Energy-loss S Transmission Electron	utcheon, D A: Neu uperstrings Field Theory ry Physics - Suppo Application devel losts of the Edmon nergy, Mines and opic Variations in a spectrometry and a	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling amograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR	\$ \$ \$ \$	19,100 10,000 17,000 36,346	NSERC AMOCO EMRC NSERC NSERC
Co-investigator with Huampbell, B A Superunification and Suapri, A Z Solutions in Quantum Fumming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Conversional Network for Erest Systematics of Pb Isotoperton, R F Electron Energy-loss S Transmission Electron	utcheon, D A: Neuroperstrings Field Theory ry Physics - Support Application develops of the Edmonnergy, Mines and opic Variations in the pectrometry and a Microscope	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling smograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR OPR EQP	\$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000	NSERC AMOCO EMRC NSERC NSERC NSERC
Co-investigator with Hu ampbell, B A Superunification and Si apri, A Z Solutions in Quantum F umming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto gerton, R F Electron Energy-loss S Transmission Electron vans, M E Quaternary Paleomagn	utcheon, D A: Neuroperstrings Field Theory ry Physics - Support Application develops of the Edmonnergy, Mines and opic Variations in the pectrometry and a Microscope	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling smograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR OPR	\$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800	NSERC AMOCO EMRC NSERC NSERC NSERC
Co-investigator with Hu ampbell, B A Superunification and Su apri, A Z Solutions in Quantum F umming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto gerton, R F Electron Energy-loss S Transmission Electron vans, M E Quaternary Paleomagn	uperstrings Field Theory ry Physics - Support Application developers of the Edmonnergy, Mines and opic Variations in the pectrometry and a Microscope netic and Archeometric and	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling smograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000 34,560	NSERC AMOCO EMRC NSERC NSERC NSERC
Co-investigator with Huampbell, B A Superunification and Superi, A Z Solutions in Quantum Furming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Conversional Network for Error Systematics of Pb Isotoperton, R F Electron Energy-loss Son Transmission Electron rans, M E Quaternary Paleomagnanck, J P Properties of Quantum	uperstrings Field Theory ry Physics - Support Application developers of the Edmonnergy, Mines and opic Variations in the pectrometry and a Microscope netic and Archeometric and	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C	Degrees ed Visitors and Faculty Support for Forward and Inverse Modeling smograph Station of the Canadian tmental Award Crustal Seismic Studies	OPR OPR OPR OPR EQP	\$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000	NSERC AMOCO EMRC NSERC NSERC NSERC
Co-investigator with Huampbell, B A Superunification and Superi, A Z Solutions in Quantum Furming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Conversional Network for Error Systematics of Pb Isotoperton, R F Electron Energy-loss Son Transmission Electron rans, M E Quaternary Paleomagnanck, J P Properties of Quantum ortel, Z	uperstrings Field Theory ry Physics - Support Application developers of the Edmon nergy, Mines and opic Variations in the Microscope netic and Archeom Solids	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C Analytical Electron	ed Visitors and Faculty Support for Forward and Inverse Modeling mograph Station of the Canadian tmental Award Crustal Seismic Studies Microscopy	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000 34,560 33,600	NSERC AMOCO EMRC NSERC NSERC NSERC NSERC
Co-investigator with Huampbell, B A Superunification and Suapri, A Z Solutions in Quantum Furming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Convertional Network for Error Systematics of Pb Isotogerton, R F Electron Energy-loss Son Transmission Electron rans, M E Quaternary Paleomagnianck, J P Properties of Quantum portel, Z Desorption Kinetics Suitable A Z Desorption Kinetics Suitable A Z	uperstrings Field Theory ry Physics - Support Application developers of the Edmon nergy, Mines and opic Variations in the Microscope netic and Archeom Solids	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C Analytical Electron	ed Visitors and Faculty Support for Forward and Inverse Modeling mograph Station of the Canadian tmental Award Crustal Seismic Studies Microscopy	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000 34,560	NSERC AMOCO EMRC NSERC NSERC NSERC NSERC
Co-investigator with Huampbell, B A Superunification and Superior, A Z Solutions in Quantum Furming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Convertion National Network for Error Systematics of Pb Isotomy System	uperstrings Field Theory ry Physics - Support Application developts of the Edmon energy, Mines and opic Variations in electrometry and electr	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C Analytical Electron magnetic Investigat	ed Visitors and Faculty Support for Forward and Inverse Modeling mograph Station of the Canadian thmental Award Crustal Seismic Studies Microscopy tions	OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000 34,560 33,600 10,560	NSERC AMOCO EMRC NSERC NSERC NSERC NSERC NSERC
Co-investigator with Huampbell, B A Superunification and Superi, A Z Solutions in Quantum Furming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Converted Systematics of Pb Isotomy Systematics of Pb Isotomy Fundamental Network for English Systematics of Pb Isotomy Fundamental Network for English Systematics of Pb Isotomy Fundamental Network Fundamen	uperstrings Field Theory ry Physics - Support Application developts of the Edmon energy, Mines and opic Variations in electrometry and electr	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C Analytical Electron magnetic Investigat	ed Visitors and Faculty Support for Forward and Inverse Modeling mograph Station of the Canadian thmental Award Crustal Seismic Studies Microscopy tions	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000 34,560 33,600	NSERC AMOCO EMRC NSERC NSERC NSERC NSERC
Co-investigator with Hu ampbell, B A Superunification and So apri, A Z Solutions in Quantum F umming, G L Inst of Earth & Planetar Specific Research and Techniques To Cover Operating Co National Network for Er Systematics of Pb Isoto gerton, R F Electron Energy-loss S Transmission Electron vans, M E Quaternary Paleomagn anck, J P Properties of Quantum ortel, Z Desorption Kinetics Sui ough, D I Magnetovariation, Mag ray, J	uperstrings Field Theory ry Physics - Support Application developts of the Edmon energy, Mines and opic Variations in a pectrometry and a Microscope enetic and Archeom Solids rface States and a metotelluric and P	ort for Distinguishe opment - Seismic ton Standard Seis Resources-Depar Ores and Rocks-C Analytical Electron magnetic Investigat Adsorption on Sen aleomagnetic Stud	ed Visitors and Faculty Support for Forward and Inverse Modeling mograph Station of the Canadian thmental Award Crustal Seismic Studies Microscopy tions	OPR OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$ \$ \$	19,100 10,000 17,000 36,346 28,800 324,000 34,560 33,600 10,560	NSERC AMOCO EMRC NSERC NSERC NSERC NSERC NSERC NSERC

Investigator	Project Title	Award		Amount	Agency
Green D.W					
Green, P W Co-investig	gator with Moss, G A: Ratio of Spin Transfer Parameters				
	of Alberta VAX Computer Facility	INF	\$	27,763	NSERC
•	gator with Greeniaus, L G: Charge Symmetry Breaking in n-p		•	_,,,,,	
	gator with Moss, G A: Measurement of the n-p Spin Correlation				
	gator with Hutcheon, D A: Polarization Transfer to Deuteron				
Greeniaus, L G					
	gator with Moss, G A: Ratio of Spin Transfer Parameters				
	gator with Hutcheon, D A: Neutron Capture at 0 Degrees	ODD	Φ.	00.740	NOEDO
	/mmetry Breaking in n-p Elastic Scattering at 350 MeV	OPR	\$	29,746	NSERC
	gator with Hutcheon, D A: Polarization Transfer to Deuteron				
Hron, F	gator with Moss, G A: Measurement of the n-p Spin Correlation				
Numerical Hube, D P	Modelling of Seismic Waves in Complex Geological Structures	OPR	\$	31,680	NSERC
Photometr	ric and Spectroscopic Studies of Early Type Stars	OPR	\$	10,176	NSERC
Hughes, D G Nuclear M	lagnetic Resonance in Solids and Biological Materials	OPR	\$	18,048	NSERC
Hutcheon, D A	•		,		
	on Transfer to Deuteron	OPR	\$	13,733	NSERC
Israel, W	apture at 0 Degrees	OPR	\$	35,596	NSERC
Strong Gra Jones, F W	avitational Fields	OPR	\$	42,912	NSERC
	emperature Data from Canadian Sedimentary Basins	CTR	\$	29,000	EMRC
	gnetic Induction, Heat Flow, and Earth Tides and Tilts	OPR	\$	26,880	NSERC
Kamal, A N	J Davida Anatoria	000	•	00.400	NOEDO
Kanasewich, E R	ıl Particle Analysis	OPR	\$	29,400	NSERC
	omography in Steam Injection Projects	CTR	\$	185,000	AOSTR
	sing and Preliminary Interpretation of Selected Industry Acquired Regional Seismic Data from Melville Island	CTR	\$	25,650	EMRC
	f Cold Lake Seismic Tomographic Studies in Steam Injection Projects and f Cold Lake Seismicity	OPR	\$	8,000	IOL
Geophysic Kernahan, J A	cal Investigation of the Crust and Mantle	OPR	\$	66,133	NSERC
	gator with Pinnington, E H: Spectroscopic Studies of Atomic				
Khanna, F C					
	n-nucleon Degrees of Freedom in Nuclei	OPR	\$	30,720	NSERC
Kitching, P	gator with Cameron, J M: University of Alberta-TRIUMF Research-Support				
	oton Bremsstrahlung	OPR	\$	17,847	NSERC
Matsumoto, H	J. O. I. O.	0	*	17,017	1102110
	ductivity and Magnetism	OPR	\$	23,600	NSERC
McDonald, W J	gator with Roy, G: Measurement of Parity Violation				
	gator with Cameron, J M: Determination of the Deuteron Charge				
	noton Induced Reaction	OPR	\$	64,449	NSERC
	gator with Moss, G A: Measurement of the n-p Spin Correlation		•	,	
	gator with Cameron, J M: University of Alberta-TRIUMF Research-Support				
`	gator with Greeniaus, L G: Charge Symmetry Breaking in n-p				
Miller, C A					
	gator with Greeniaus, L G: Charge Symmetry Breaking in n-p				
	gator with Moss, G A: Measurement of the n-p Spin Correlation				
	gator with Hutcheon, D A: Neutron Capture at 0 Degrees				
Moss, G A	gator with Roy, G: Measurement of Parity Violation				
	gator with Hutcheon, D A: Polarization Transfer to Deuteron				
	oin Transfer Parameters in Dt/Rt in n-p Scattering	OPR	\$	6,941	NSERC
•	gator with Cameron, J M: University of Alberta-TRIUMF Research-Support				
Measurem	nent of the n-p Spin Correlation Parameter Ann (IEP-127)	OPR	\$	4,958	NSERC
Co-investi	gator with Greeniaus, L G: Charge Symmetry Breaking in n-p				

Nelison C C Co-investigator with Shoppard, D M: O-Measurement on 40Ca at 1 GeV . Co-investigator with Cameron, J M: Determination of the Bouteron Charge . Co-investigator with Cameron, J M: Determination of the Bouteron Charge . Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support . Nyland, E Geodynamics of Plate Margin Interaction: Seismic Aspects Co-investigator with Cameron, D A: Polarization Transfer to Deuteron . Co-investigator with Cameron, D A: Polarization Transfer to Deuteron . Co-investigator with Cameron, D A: Polarization Transfer to Deuteron . Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support . Co-investigator with Kiching, P: Proton-Proton Briemsstrahlung . Co-investigator with Kiching, P: Proton-Proton Briemsstrahlung . Co-investigator with Stephan C J M: University of Alberta-TRIUMF Research-Support . Co-investigator with Stephan C J M: With Cameron, J M: University of Alberta-TRIUMF Research-Support . Co-investigator with Stephan C J M: With Cameron, J M: University of Alberta-TRIUMF Research-Support . Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support . Scattering Theory & Many-Body Problem Scattering Scattering Theory & Many-Body Problem Scattering Theory & Many-Body Problem Scattering Scattering Theory & Many-Body Problem Scattering Theory & Many-Body Problem Scattering Scattering Theo	Investigator	Project Title	Award		Amount	Agency
Co-investigator with Cameron, J. Mr. Determination of the Deuterino Charge Co-investigator with Cameron, J. Mr. University of Alberta-TRIUMF Research-Support Nyland, E Startup of Microselsmic Monitoring of the Strachan Gas Field Co-investigator with Cameron, J. Mr. University of Alberta-TRIUMF Research-Support Satistrup of Microselsmic Monitoring of the Strachan Gas Field Co-investigator with Kanasewich, E. R. Sesmic Tomography in Steam Injection Geodynamics of Plate Margin Interaction: Sesmic Aspects Olsen, W. C Co-investigator with Hutcheon, D. A. Potarization Transfer to Deuteron Co-investigator with Kinching, P. Proton-Proton Bremsstrahlung Co-investigator with Kinching, P. Proton-Proton Bremsstrahlung Co-investigator with Steparic, D. Mr. J. Wasserment on 40Ca at 1 GeV Paraligae, B. V Proporties of Two Crystals and Surface Plasma Excitation O-investigator with Steparic, D. Mr. J. Wasserment on 40Ca at 1 GeV Spectroscopic Studies of Atomic Energy Levels Spectroscopic Studies of Atomic Energy Levels Spectroscopic Studies of Atomic Energy Levels Sazary, M. Scattering Theory & Many-Body Problem Scattering Theory &	Neilson, G C					
Co-investigator with McDonald, W.J. Tagged Photon Induced Reaction Co-investigator with Cameron, J.M. University of Albertar TRIUMF Research-Support Nyland, E. Startup of Microselismic Monitoring of the Strachan Gas Field Co-investigator with Kanasewich, E. R. Selismic Tomography in Steam Injection Geodynamics of Plate Margin Interactions Sessima Aspects Co-investigator with Hutcheon, D.A. Polarization Transfer to Deuteron Co-investigator with Hutcheon, D.A. Polarization Transfer to Deuteron Co-investigator with Kitching, P. Proton-Proton Bremsstrahlung Co-investigator with Sheppard, D.M. G-Measurement on 40Ca at 1 GeV Paranjapa, B.Y. Paranjapa, B.Y. Paranjapa, B.Y. Interface Properties of Two Crystals and Surface Plasma Excitation With Cameron and Co-investigator with Sheppard, D.M. G-Measurement on 40Ca at 1 GeV Paranjapa, B.Y. Paranjapa, B.Y. Paranjapa, B.Y. Interface Properties of Two Crystals and Surface Plasma Excitation With Cameron and Camer	_					
Oc-investigator with Cameron, J. M. University of Alberta-TRIUNF Research-Support Startup of Microselsrinc Monitoring of the Strachan Gase Field Co-investigator with Kanasewich, E. R. Selamic Tomography in Steam Injection Geodynamics of Pale Margin Interaction. Selamic Aspects Olsen, W. C. Co-investigator with Kiching, P. Proton-Proton Bremsstrahlung Co-investigator with Steppard, D. M. Co-Messurement and Coda at 1 GeV Paranippe, B. V Interface Properties of Two Crystals and Surface Plasma Excitation Open S. 9,792 NSERC Paranippe, B. V Interface Properties of Two Crystals and Surface Plasma Excitation Open S. 22,800 NSERC Research Selatering Theory & Many-Body Problem Scattering Theory & Many-Body Problem Rostoker, G. Geodynamic Support Services - To Cover the Cost of Editional Support Services and Incidental Expenses Incurred by Dr. Gractor Selatering Theory & Many-Body Problem Go-investigator with Samon, J.C.:Tape Transport Roy, G. Determination Of The Deuteron Charge Form Factor At Large Q (Squared) Co-investigator with Samon, J.C.:Tape Transport Roy, G. Determination Of The Deuteron Charge Form Factor At Large Q (Squared) Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J. M. University of Albe	_					
Nyland, E Startup of Microseismic Monitoring of the Strachan Gas Field Co-investigator with Kanasewich, ER: Seismic Tomography in Steam Injection						
Startup of Microseismic Monitoring of the Strachan Gas Field Co-investigator with Kanaseswich, E.R. Seismic Tomography in Steam Injection		vith Cameron, J. M.: University of Alberta-THIOMF Hesearch-Support				
Co-investigator with Kanasewich, E. R. Seismic Tomography in Steam Injection		seismic Monitoring of the Strachan Gas Field	CTR	\$	13,500	AE
Oisen, W C Co-investigator with Hutcheon, D.A. Polarization Transfer to Deuteron	•					
Co-investigator with Elutcheon, D. A. Polarization Transfer to Deuteron Co-investigator with Sching, P. Proton-Proton Bremsstrablung Co-investigator with Cameron. J M. University of Alberta-TRIUMF Research-Support Co-investigator with Cameron. J M. University of Alberta-TRIUMF Research-Support Paranjape, B V Interface Properties of Two Crystals and Surface Plasma Excitation		Plate Margin Interaction: Seismic Aspects	OPR	\$	14,600	NSERC
Co-investigator with Kitching, P. Proton-Proton Bremsstrahlung Co-investigator with Sheppard, D.M.; Q-Measurement on 40Ca at 1 GeV Paranjapa. 84 Spectroscopic Studies of Nor Crystals and Surface Plasma Excitation Pininington, E H Spectroscopic Studies of Atomic Energy Levels Scattering Theory & Many: Body Problem Scattering Theory & Many: Body Problem Scattering Theory & Many: Body Problem Scattering Services - To Cover the Cost of Editorial Support Services and Incidental Expenses Incurred by Dr. G Rostoker as Editor of the Canadian Journal of Physics Geomagnetic Activity in the Auroral Zone Geomagnetic Activity in the Auroral Zone Geomagnetic Activity in the Auroral Zone Oci-investigator with Hutcheon, D. A.; Polarization Transfer to Deuteron Co-investigator with Hutcheon, D. A.; Polarization Transfer to Deuteron Co-investigator with Cameron, J. M. Determination of the Deuteron Charge Co-investigator with Offenberger, A. (Engineering, Electrical Engineering): Laser Fusion Related Research Samson, J.C Tape Transport Shudies of ULF Magnetic Fields, and Plasma Waves in the Earth's Magnetosphere Shepard, D.M Co-investigator with Cameron, J.M.: University of Alberta-TRIUMF Research-Support Co-investigator with Hutcheon, D.A. Polarization Transfer to Deuteron Charge Co-investigator with Hutcheon, D.A. Polarization Transfer to Deuteron Related Research Samson, J.C Tape Transport Shepard, D.M Co-investigator with Generon, J.M.: University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J.M.: University of Alberta-TRIUMF Research-Support Co-investigator with Cameron, J.M.: University of Alberta-TRIUMF Research-Support Co-investig		with Hutcheson D. A. Delevinstien Transfer to Deutogen				
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Co-investigator with Sheppard, D.M.: Q-Measurement on 40Ca at 1 GeV Paranjape, B V Interface Properties of Two Crystals and Surface Plasma Excitation Interface Properties of Two Crystals and Surface Plasma Excitation Spectroscopic Studies of Alomic Energy Levels Spectroscopic Studies of Alomic Energy Levels Spectroscopic Studies of Alomic Energy Levels Sociating Theory & Many-Body Problem Cetitorial Support Services - To Cover the Cost of Editorial Support Services and Incidental Expenses Incurred by Dr G Rostoker as Editor of the Canadian Journal of Physics Geomagnetic Activity in the Auroral Zone Co-investigator with Samson, J C; Tape Transport Roy, O Determination Of The Deuteron Charge Form Factor At Large Q (Squared) Determination Of The Deuteron Charge Form Factor At Large Q (Squared) Determination Of The Deuteron Charge Form Factor At Large Q (Squared) Determination of The Deuteron Charge Form Factor At Large Q (Squared) Determination of The Deuteron Charge Form Factor At Large Q (Squared) Determination of The Deuteron Charge Form Factor At Large Q (Squared) Determination of The Deuteron Charge Form Factor At Large Q (Squared) Determination of The Deuteron Charge Form Factor At Large Q (Squared) Determination of The Deuteron Charge Form Factor At Large Q (Squared) Determination of the Deuteron Charge Det	_	· · · · · · · · · · · · · · · · · · ·				
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Transmission Electron Microscopy Co-investigator with Egerton, R F: Transmission Electron Microscope		Magnetic Fields, and Plasma Waves in the Earth's Magnetosphere	OPR	\$	34,560	NSERC
Co-investigator with Egerton, R F: Transmission Electron Microscope		ectron Microscopy	OPR	\$	28 800	NSERC
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Co-investigator with Hutcheon, D A: Polarization Transfer to Deuteron Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support Q-Measurement on 40Ca at 1 GeV OPR \$ 15,864 NSERC Sherif, H S Theoretical Studies in Intermediate Energy Nuclear Reactions OPR \$ 13,987 NSERC Spanos, T J T Thermo-Mechanics of Heavy Oil Reservoirs CTR \$ 50,280 AOSTR Stephenson, J Theory of Phase Transitions, Statistical Mechanics and Thermodynamics of Fluids and Magnetic Systems Stinson, G M Co-investigator with Cameron, J M: Determination of the Deuteron Charge Co-investigator with McDonald, W J: Tagged Photon Induced Reaction Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support Takahashi, Y Quantum Field Theory Method in Particle and Many Body Physics OPR \$ 32,352 NSERC Umezawa, H		With Egotton, TTT: Transmission Election Microscope				
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Magnetic Systems Stinson, G M Co-investigator with Cameron, J M: Determination of the Deuteron Charge Co-investigator with McDonald, W J: Tagged Photon Induced Reaction Co-investigator with Roy, G: Measurement of Parity Violation Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support Takahashi, Y Quantum Field Theory Method in Particle and Many Body Physics OPR \$ 32,352 NSERC		Transitions Statistical Mechanics and Thermodynamics of Fluids and	OPR	\$	9 830	NSERC
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Co-investigator with Roy, G: Measurement of Parity Violation Co-investigator with Cameron, J M: University of Alberta-TRIUMF Research-Support Takahashi, Y Quantum Field Theory Method in Particle and Many Body Physics OPR \$ 32,352 NSERC Umezawa, H	_					
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Umezawa, H		Theory Method in Particle and Many Body Physics	OPR	\$	32,352	NSERC
Study of Ordered States in Particle Physics and Many-Body-Problems OPR \$ 49,920 NSERC	Umezawa, H				,	NOTE
	Study of Ordere	d States in Particle Physics and Many-Body-Problems	OPR	\$	49,920	NSERC

Investigator	Project Title			Award		Amount	Agency
Weichman, F L							
Measurements				CTR	\$	20,563	COM
Defect Identification in Ga	aAs			OPR	\$	18,600	NSERC
Co-investigator with Eger		sion Electron Mi	icroscope				
Woods, S B			1				
Metals at Low Temperatu	ıres			OPR	\$	43,200	NSERC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	9,000	NSERC	48	\$	2,067,051	
Contracts	7 \$	368,993	Other Provincial	3	\$	248,780	
Equipment	2 \$	340,575	Other Federal	4	\$	116,650	
Infrastructure Operating	1 \$ 48 \$	27,763 1,742,263	Other Agencies Total	4 59	\$ \$	56,113 2,488,594	
Total	59 \$	2,488,594	Total	00	•	_, 100,00 1	
Department of Psycholo	gy see also Facu	lty of Arts					
Investigator	Project Title			Award		Amount	Agency
Bourassa, C M Factors Influencing Visible	le Persistence and	Perceptual Scho	emata	OPR	\$	10,000	NSERC
Caelli, T M							
Di Lollo, V	OPR	\$	40,000	NSERC			
	nected with Editori	al Work on the C	Canadian Journal of Psychology	OPR	\$	14,600	CPSYA
Initial Stages of Visual Int	formation Processi	ng		OPR	\$	38,863	NSERC
Dobbs, A R	ssident Oroventian			OPR	\$	62,600	ACOH
Minor Head Injury and Ad				OPR	\$	10,650	AMHAC
Spatial orientation in Alzh				OPR	\$	46,101	AMHAC
Memory Deficits in the Ag	•	o for Aggression		OFN	Φ	46,101	AMINAC
Co-investigator with Rule Grant, D S	e, B G (Arts): Script	s for Aggression	l				
Short-term Retention in F	Pigeons			OPR	\$	20,301	NSERC
Heth, C D	•						
Processes of Spatial Sea Kavaliers, M	arch			OPR	\$	10,254	NSERC
Opioid Systems and Beh	avioral, Environme	ental and Physiol	logical Factors	OPR	\$	38,015	NSERC
Kingma, Y J Memory Development in	Disabled and Men	tally Retarded C	hildren	OPR	\$	12,000	NSERC
Robertson, A M				ODD	ď	14 000	NCEDO
Neural Substrates of Pre- Rozeboom, W W	frontal Cortex Self-	-Stimulation and	of Neurolepric Drugs	OPR	\$	14,880	NSERC
Quadratic Factor Analysi	s			OPR	\$	3,840	NSERC
Rule, S J Judgments of Perceptual	l Magnitudes			OPR	\$	24,934	NSERC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	14 \$	347,038	NSERC	10	\$	213,087	
Operating	ι-τ Ψ	3-11,000	Other Provincial	3	\$	119,351	
			Other Agencies	1	\$	14,600	
			Total	14	\$	347,038	
Department of Statistics		-		_		_	
Investigator	Project Title			Award		Amount	Agency
Al-Hussaini, A Stochastic Processes				OPR	\$	8,388	NSERC
Aly, E E A		, 					
_	eak Approximation:	s and Their Appl	ications in Nonparametric	OPR	\$	7,200	NSERC
Statistics Elliott, R J							
Filtering and Smoothing	of Stochastic Proc	esses		OPR	\$	15,000	NSERC
Filtering of Jump Process				CTR	\$	31,335	USAF
Ghurye, S G					·		
Problems in Applied Mat	hematical Statistic	S		OPR	\$	6,720	NSERC
Hooper, P M	Prodiction in Mulain	ariata Analysis		OPR	\$	7,968	NSERC
Optimal Estimation and F	riediction in MultiV	anale Analysis		OFR	Ф	7,900	NOENU

Investigator	Project T	itle			Award		Amount	Agency
Karunamuni, R J		_						
On the Empirical Bay	res Procedure				OPR	\$	6,000	NSERC
Prasad, N G N Small Area Estimatio	n; Jackknife Proced	dure	for Variance Co	omponent Models	OPR	\$	6,000	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	1	\$	31,335	NSERC	7	\$	57,276	
Operating Total	7 8	\$ \$	57,276 88,611	Other Agencies Total	1 8	\$ \$	31,335 88,611	
rotai	· ·	Ψ	00,011	Total		•	00,011	
Department of Zoolog	ду							
Investigator	Project T	itle			Award		Amount	Agency
Addicott, J F Regulation of Costs a	and Benefits in Mut	ualie	tic Systems		OPR	\$	27,500	NSERC
Boag, D A	and Denents in Mat	uans	lic Oystems			·		
Gyrfalcon Foraging S	-				OPR	\$	2,000	EC
Fate of Carbofuran in		l its E	ffects on Aqua	tic Invertabrates	OPR	\$	10,600	EC
Problems in Animal [•	I. F	Sintaniant Dans	avah Ctation	OPR	\$	39,500	NSERC
Co-investigator with I Are Artificial Islands i	•		_		OPR	\$	5,000	RPWF
Boutin, S A	III Silallow Water D	oules	s an Ecological	Trap for waterlow	0111	Ψ	3,000	10 441
Experimental Analysi \$275,000.00 - Collab	is of Vertebrate Co	mmu Kreb	nity Dynamics i	in the Boreal Forest:	OPR	\$	50,000	NSERC
Experimental Tests of				Population Regulation	OPR	\$	3,031	NSERC
Chia, F S Development and Re Biology	eproduction of Mari	ne In	vertebrates with	h Special Emphasis on Larval	OPR	\$	64,500	NSERC
Clifford, H F Ecology of Aquatic Ir	wortobrates				OPR	\$	24,960	NSERC
Gorbman, A	ivertebrates				0.71	Ψ	21,000	1102110
Sexual Development	t of Hagfish				OPR	\$	8,000	NSERC
Hannon, S J Aggression and Terri	itoriality in Female	Willo	w Ptarmigan		OPR	\$	6,150	NGS
				ystem in Northern Birds	OPR	\$	14,400	NSERC
				rs of Willow Ptarmigan	OPR	\$	4,000	NSERC
Holmes, J C		.:4: _ 1	la las las la		ODD	\$	20 500	NSERC
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	evelopmental Studi	es or	the Salivary G	lands and Ovaries of Ixodid	OPR	\$	24,000	NSERC
Ticks (Acari: Ixodida	e)							
Lauber, J K Photobiological Effect	cts on Endocrine ar	nd Gr	owth Paramete	ers	OPR	\$	28,800	NSERC
MacKay, W C								. –
Applied Aquatic Stud	•		-		CTR	\$	1,500	AE
Co-investigator with	•				ODD	d	22.006	AERT
Role of Benthic Inve Environmental Physi		и Сус	ng in Lakes		OPR OPR	\$ \$	23,096 19,000	NSERC
Co-investigator with	• .	nok l	Biological Rese	earch Station	0111	Ψ	13,000	NOLITO
				(nowing the North: Integrating				
Mahrt, J L						_		
Investigations on Pro					OPR	\$	15,360	NSERC
Co-investigator with Malhotra, S K	Zwickel, F.C: Popu	ilatioi	n Ecology of Ve	ertebrates				
Plasma Membrane:	Immunocytochemic	cal ar	nd Structural St	udies	OPR	\$	30,336	NSERC
	•			Electron Microscope				
Murie, J O	Life History and C	امانما	Pohavior of Co	iurid Padants	OPR	\$	29,500	NSERC
Behavioral Ecology, Nelson, J S	Life mistory, and S	ocial	Deliavior of SC	iunu nouents	OFR	Φ	25,500	NOENO
Systematic and Biog				ottoid Fishes, Classification of	OPR	\$	24,000	NSERC
Fishes, and Evolutio	nary Studies of Pri	maril	y Stickleback F	ishes				
Nursall, J R Biology and Sexual I	Behavior in Ophiob	lenni	us atlanticus		OPR	\$	15,000	NSERC
Palmer, A R				etic Basis and Adaptive Value of	OPR	\$	46 E00	NSERC
Shell Form and Evol Entraspecific Shell V		UII G	astropous: Gen	etic Basis and Adaptive Value of	OFR	Φ	46,500	NOENU

Investigator	Project	Title			Award		Amount	Agency
Peter, R E							-	-
Induced Spawning (Alberta/Ch	ina)				CTR	\$	53,530	IDRC
Neuroendocrine and Endocrine	e Contro	Me	chanisms in Tele	ost Fishes	OPR	\$	72,732	NSERC
Prepas, E E Monitoring Groundwater Contr Alberta	ibution to) Wa	ater and Nutrient	Budgets of Aquatic Systems in	CTR	\$	19,975	AE
Partial Support for Visiting Spe	akers: Z	oolo	gy Seminar Serie	es	CTR	\$	2,200	AE
Water Quality Survey					CTR	\$	5,500	AE
Figure Eight Lake Aerations St	udy				OPR	\$	15,000	AE
An Atlas of Alberta Lakes	. 5.				CTR	\$	10,000	AE
				reenness in Deep Alberta Lakes	OPR OPR	\$ \$	21,800	AERT EC
Deep Prairie Lake Prediction and Manipulation of				osphorus and Nitrogen Source in	OPR	Ф \$	12,000 27,500	NSERC
Meanook Biological Research		ivity	iii Eutrophic Laki	es	INF	Ф \$	14,788	NSERC
Reimchen, T E						Ψ		
Niche Segregation, Sources of	Mortalit	y an	d Adaptation in S	tickleback	OPR	\$	19,200	NSERC
Samuel, W M Impact of the Winter Tick, Derr	nacento	r alb	ipictus, on Moose	9	OPR	\$	28,800	NSERC
Big Game Susceptibility to Wir					OPR	\$	14,000	RPWF
Spencer, A N			and a large of a large		000	Φ	07.004	NOEDO
Cellular Basis of Simple Behav Inverted Microscope	viours in	Inve	rtebrates		OPR EQP	\$ \$	37,964 17, 1 97	NSERC NSERC
Stacey, N E					LQI	Ψ	17,137	NOLHO
Hormonal, Pheromonal, and C	entral N	euro	chemical Aspects	s of Sexual Behavior in Fish	OPR	\$	36,352	NSERC
Steiner, A L Behavioral and Evolutionary B Stirling, I G	iology of	Wa	sps, Their Insect	Prey and Parasites	OPR	\$	9,000	NSERC
Body Composition in Bears wit Condition in Polar Bears	th the De	evelo	pment of Technic	ques to Measure Physical	CTR	\$	1,000	EC
Feeding Ecology of Ringed Se Fall	als in the	e Sc	utheast Beaufort	Sea During Late Summer and	OPR	\$	9,000	FOC
Deposition and Use of Fat in F Strobeck, C	olar Bea	ırs a	nd Black Bears		OPR	\$	20,100	NSERC
Molecular Approaches to the S	-		-		OPR	\$	33,438	NSERC
_ , _			• '	ic Variation and Adaptation				
Co-investigator with Prepas, E Tonn, W M	E: Mear	1001	Biological Resea	arch Station				
Community Ecology abd Popu	lation Re	gul	ation of Fishes in	Small Boreal Lakes	OPR	\$	22,500	NSERC
Co-investigator with Prepas, E	E: Mear	rool	Biological Resea	arch Station				
Wang, L C H Investigate Mode and Mechan	ism of TI	าคกเ	hvlline - Stimulat	ted Thermogenesis	CTR	\$	64,700	DND
Homeotherms in Cold: Strateg			•	Thomas and the second	OPR	\$	47,316	NSERC
Co-investigator with Clandinin,				ds and Nutrition): Demonstration		·	,	
of the in-vivo Significance Co-investigator with Clandinin.	MT (He	nme	Economics Foor	ds and Nutrition): Bellows				
Assembly for Existing Isotope		,,,,	200110111103, 1 000	do and realition). Dollows				
Co-investigator with Pang, P k	(Medici	ne,	Physiology): Herb	oal Medicine Program				
Wilson, M V Late Cretaceous and Early Te	rtiarv Fis	hes	of North America	1	OPR	\$	22,080	NSERC
Zalik, S E	-					·		
Labconco Freeze Dryer with V				•	EQP	\$	20,222	AHFMR
Studies on the Biology of Cellu Studies on the Cell Surface Du				_	OPR OPR	\$ \$	42,278 40,000	MRC NSERC
Zwickel, F C	ing Dec	Jille	rentiation, Dinere	milation and Development	OPh	Φ	40,000	Noenc
Population Ecology of Vertebra	ates				OPR	\$	35,520	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	8	\$	158,405	AHFMR	1	\$	20,222	
Equipment Infrastructure	2 1	\$ \$	37,419 14,788	MRC NSERC	1 35	\$ \$	42,278 982,374	
Operating	44	\$	1,111,313	Other Provincial	10	\$	118,071	
Total	55	\$	1,321,925	Other Federal	7	\$	152,830	
				Other Agencies Total	1 55	\$ \$	6,150 1,321,925	
				10101	33	Ψ	1,021,323	

VP Academic

Type of Award	No.		Amount	Source of Funds	No.		Amount	
Infrastructure Operating Total	2 1 3	\$ \$ \$	93,800 8,125 101,925	AHFMR SSHRC Other Federal	1 1 1	\$ \$	83,800 10,000 8,125	
				Total	3	\$	101,925	
orary System								
estigator	Project	Title			Award		Amount	Agency
arles, J Home Museum of Artists' E eman, P	3ooks				INF	\$	10,000	SSHRO
Award to U of A Medical Li	ibrary - Libra	ary Su	oport		INF	\$	83,800	AHFMF
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Infrastructure	2	\$	93,800	AHFMR	1	\$	83,800	
				SSHRC	1	\$	10,000	
				Total	2	\$	93,800	
iversity of Alberta Arcl	nives							
estigator	Project	Title			Award		Amount	Agenc
ker, J M William Pearce Papers					OPR	\$	8,125	CCA
Operating				Other Federal	1	\$	8,125	
P Research								
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	3,000	SSHRC	1	\$ ¢	3,000	
Conferences Contracts	1 3	\$	3,000 75,778	SSHRC Other Provincial	1	\$	3,000 10,000	
Conferences	1	\$ \$ \$	3,000	SSHRC	1	\$ \$ \$	3,000	
Conferences Contracts	1 3	\$	3,000 75,778	SSHRC Other Provincial Other Federal	1 1 2	\$ \$	3,000 10,000 65,778	
Conferences Contracts Total	1 3	\$ \$	3,000 75,778	SSHRC Other Provincial Other Federal	1 1 2	\$ \$	3,000 10,000 65,778	Agenc
Conferences Contracts Total P Research	1 3 4	\$ \$	3,000 75,778	SSHRC Other Provincial Other Federal	1 1 2 4	\$ \$	3,000 10,000 65,778 78,778	Agency

CTR \$

CTR

No.

2

4

Source of Funds

Other Provincial Other Federal

SSHRC

Total

Amount

3,000

75,778 **78,778** CTR \$

\$ \$ \$ **\$**

10,000

37,078

28,700

Amount

3,000

10,000 65,778

78,778

ATRT

NRC

NRC

Armit, RE

Kaplan, J G

Technology Transfer

Type of Award

Conferences

Contracts

Total

A Biotechnology Inventory Study at the University of Alberta

No.

1 \$

3 \$ **4** \$

A Study of Technology Transfer - University of Alberta

Interdisciplinary Research Units

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	1	\$ 3,050	NSERC	4	\$ 41,918
Contracts	1	\$ 30,000	SSHRC	1	\$ 34,055
Operating	6	\$ 115,162	Other Provincial	3	\$ 72,239
Total	8	\$ 148,212	Total	8	\$ 148,212

Boreal Institute for Northern Studies

Investigator	Project	Title			Award	 Amount	Agency
Gibson, N							
Co-investigator with	r Freeman, M M (A	rts, Ar	ithropology): "K	nowing the North: Integrating.			
Mohsen, A S							
Fort Chipewyan Bio	entennial Contract	CTR	\$ 30,000	AC			
Knowing the North:	Integrating Tradition	CFC	\$ 3,050	NSERC			
Co-investigator with	r Freeman, M M (A	rts. Ar	nthropology): "K	nowing the North: Integrating			
Moore, A	, ,	.,	1 377	3 4 4 4 3			
Co-investigator with	n Freeman, M M (A	rts, An	rthropology): "K	nowing the North: Integrating.			
Type of Award	No.		Amount	Source of Funds	No.	Amount	
Conferences	1	\$	3,050	NSERC	1	\$ 3,050	
Contracts	1	\$	30,000	Other Provincial	1	\$ 30,000	
Total	2	\$	33,050	Total	2	\$ 33,050	

Canadian Institute of Ukrainian Studies

Investigator	Project Title	Award	Amount	Agency
	ing of Encyclopedia of Ukraine, \$57,659.96. Funding is Administered clopedia Office at the University of Toronto	OPR		CFUS

Center for the Study of Mental Retardation

Investigator	Project T	itle			Award	Amount	Agency
Das, J P							
Cognitive Strateg	ies and Reading Perfo	rman	ce		OPR	\$ 9,168	NSERC
	ttention, Coding and Pl	lannir	ng		OPR	\$ 34,055	SSHRC
Varnhagen, C K Logical Relations	& Comprehension of I	Expos	sitory Prose		OPR	\$ 10,000	NSERC
Type of Award	No.		Amount	Source of Funds	No.	Amount	
Operating	3	\$	53,223	NSERC	2	\$ 19,168	
			,	SSHRC	1	\$ 34,055	
				Total	3	\$ 53,223	

Devonian Botanic Garden

Investig	nator Project Title	Award	Amount	Agency	
Curran	, R		 		_
	Mycotrophy, Microhabitat Definition and Propagation of Native Orchids	OPR	\$ 18,727	AERT	
	Cultural and Taxonomic Studies of Ectomycorrhizal Fungi Associated with Pinus contorta and Picea mariana in West Central Alberta	OPR	\$ 23,512	AFDRT	
Sigler,	Taxonomy and Ecology of Fungi Associated With 1) Orchids, and 2) Keratinous Substrates L	OPR	\$ 19,700	NSERC	

Co-investigator with Currah, R: Cultural and Taxonomic Studies . . .

Type of Award	No.	Amount
Operating	3	\$ 61,939

Source of Funds	No.	Amount		
NSERC	1	\$	19,700	
Other Provincial	2	\$	42,239	
Total	3	\$	61,939	

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FOLIO

Special Issue

Sponsored Research at the University of Alberta 1987-1988



This special edition of *Folio* has been prepared at the request of the Vice-President (Research).

Information was compiled by the Office of Research Services in consultation with the departments and units on campus.

March 1989

Sponsored Research at the University of Alberta 1987/88

Introduction

This special edition of Folio provides a mechanism for the University of Alberta to gratefully acknowledge the role of those external organizations who have supported research programs during the 1987/88 fiscal year. The report also presents an overall statement on sponsored research at the University of Alberta, and provides an opportunity for researchers to locate other researchers and sponsoring agencies in their areas of expertise.

The listings identify selected awards totalling \$45,194,706. Total sponsored research revenue 1 in 1987/88 was \$58,929,000.

Sponsored Research

Sponsored research includes grants, contracts, and related types of external funding. Specific awards included in this report represent contracts and research prizes, plus conference, equipment, technology transfer, infrastructure, and operating research grants. Financial support provided as the result of general and development funding to the University (e.g. internal endowment transfers) is outside the scope of this report, as is sponsored research conducted by incorporated centres of research associated with the University (e.g. the Alberta Microelectronic Centre), and other affiliated institutions (e.g. the Cross Cancer Institute). All other categories and awards that were administered through organizations other than the Office of Research Services, University of Alberta (such as private consulting arrangements), are also outside the scope of this report, as is funding distributed via internal University of Alberta committees (e.g. the Central Research Fund).

Listings

This report identifies principal researchers, research projects and research sponsors, and notes the amount of each award. Oncampus co-investigators are also identified; however, a dollar value for each award is assigned only once in the report and appears with the listing of the investigator whose name occurs first on the original application.

Format

The report is organized as follows:

- 1) Listings of Faculties, Departments, and units (page 5).
- 2) Explanation of agency codes (pages 6, 7).
- 3) Agency codes listed by category (pages 7, 8).

- 4) Explanation of award codes (page 8).
- 5) Sponsored research listings (pages 9-73).
- 6) Index of researchers (pages 75-78).

Note: The name of the Faculty, Department, or unit that was used in 1987/88 is the name used here.

Dimensions of Research

Sponsored research funding is only one measure of research effort. As a result, this report is not intended, nor should it be interpreted as, representing the entire research effort at the University of Alberta. Indeed, many disciplines are continuing to achieve positive results without external sponsorship, including published articles, books and monographs, exhibitions, patents, consultations and related activities.

Additional Sources of Research Information

Other information sources help present a more comprehensive research picture of campus-wide research activity. The University of Alberta Research Expertise Database lists the research interests and major expertise of over 1200 University staff. It is multi-disciplinary in scope, and provides an effective way to identify and locate University staff having specific knowledge or expertise in a given area. The Research Expertise Database is available to anyone with access to the campus' MTS computing system.

Faculties, Institutes or research groups produce publications of their own, often presenting more technical description of their research efforts. Examples of such publications are the Faculty of Arts Report on Research and Creative Work, and the Faculty of Medicine From Laboratory to Marketplace (Biotechnology Initiatives). Among others, the Faculties of Science, Engineering, and Agriculture and Forestry also produce inventories.

Individual Departments may produce graduate calendars which are other sources of information concerning research activities. The Faculty of Graduate Studies and Research produces A *Profile* which also provides a general overview of the type of research conducted at the University of Alberta.

¹ Schedule 4, University of Alberta Financial Statements

Office of Research Services

The Office of Research Services (ORS) was established in 1982 as a reorganization of the former Research Grants and Contracts Office, and is under the direction of the Vice-President (Research). The scope of ORS functions can be divided into two areas: sponsored research and technology transfer.

In sponsored research, ORS provides the infrastructure for processing research grants (both internal through the Central Research Fund and the AHFMR Internal Allocations Committee, and external through off-campus sponsoring agencies) and contracts at the University of Alberta. In technology transfer, ORS provides support through Technology Development Officers, who assist in the transfer of University developed technologies to outside parties. ORS also maintains and updates the University of Alberta Research Expertise Database.

University of Alberta

The University of Alberta, Canada's second largest university ², is committed to the pursuit of excellence in education and research. Programs are diversified and broadly based across 18 Faculties and 88 departments. With over 1,700 faculty members having backgrounds from various parts of the world and 24,000 students from over 100 countries, the University of Alberta is appropriately referred to as an international centre in terms of its people and its outlook.

For more information on University of Alberta sponsored research, please contact:

Office of Research Services University of Alberta 1-3 University Hall Edmonton, Alberta, Canada T6G 2J9

Phone: (403) 492-5360

Selected Sponsored Research

This summary of the total amount of research awarded to individuals and directly to the University highlights the level of support provided by major agencies. The largest support to research comes from provincial and federal agencies. There is, however, a wide diversity of funding sources. A listing of all sources and their respective award codes is provided on pages 6, 7, and 8.

Research Grants and Contracts from Selected Sources to Individuals and Block Grants Administered by Faculties

Agency	Amount
AHFMR ³	\$ 5,583,945
MRC	\$ 7,009,559
NSERC	\$ 15,624,664
SSHRC	\$ 696,420
Other Provincial	\$ 6,328,816
Other Federal	\$ 3,200,278
Other Agencies	\$ 6,751,024
Total	\$ 45,194,706

External Funding Awarded to the University for Distribution through the Central Research Fund 4

Agency	Amount
AHFMR	\$ 372,800
NSERC	\$ 376,000
SSHRC	\$ 114,455
Total	\$ 863,255

²in terms of enrollment

³ The AHFMR support is partial in this report and excludes scholarship, stipend and studentship awards. AHFMR level of support including these categories was \$12,487,000.

⁴ Annual Reports for the Central Research Fund are available from either Department Chairs' offices or the Office of Research Services.

Faculties, Departments, Units	Faculty of Medicine
•	Department of Anatomy and Call Birds
Faculty of Agriculture and Forestry9	Department of Anatomy and Cell Biology
Department of Agricultural Engineering	Department of Applied Sciences in Medicine
Department of Animal Science	Department of Biochemistry
Department of Entomology	Cross Cancer Institute
Department of Food Science	Group Lipid and Lipoprotein
Department of Forest Science	Group NMR
Department of Plant Science	Department of Health Services Administration and Community
Department of Rural Economy	Medicine
Department of Soil Science	Department of Immunology
Faculty of Arts17	J S McEachern Laboratory
•	Department of Medical Microbiology and Infectious Diseases 40
Department of Anthropology	Department of Medicine and Clinical Medicine
Department of Classics	Department of Obstetrics and Gynaecology
Department of Comparative Literature	Department of Paediatrics43
Department of Economics	Department of Pathology44
Department of English	Department of Pharmacology
Department of Germanic Languages	Department of Physiology
Department of History	Department of Psychiatry
Department of Linguistics	Department of Radiology and Diagnostic Imaging 47
Department of Music	Department of Surgery and Clinical Surgery
Department of Political Science	
Department of Psychology20	Faculty of Nursing
Department of Religious Studies20	Faculty of Dhawnson and Dhawnson tipel Colonses 10
Department of Romance Languages	Faculty of Pharmacy and Pharmaceutical Sciences 49
Department of Sociology	Faculty of Physical Education and Recreation50
	Department of Athletic Services
Faculty of Business21	Department of Physical Education and Sport Studies
Department of Finance and Management Science	Department of Recreation and Leisure Studies
Department of Marketing and Economic Analysis22	Department of Necreation and Leisure Studies
Department of Organizational Analysis	Faculty of Rehabilitation Medicine52
	Department of Physical Therapy
Faculty of Dentistry	Department of Speech Pathology and Audiology
Department of Oral Biology	Dopartiment of operation attendingly and readingly
Department of Restorative Dentistry	Faculté Saint-Jean52
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Faculty of Education	Department of Botany
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Faculty of Engineering25	Department of Microbiology63
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Department of Electrical Engineering	Department of Statistics and Applied Probability
Department of Mechanical Engineering31	Department of Zoology
Department of Mining, Metallurgical	Department of Zoology
and Petroleum Engineering	Office of the President70
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Faculty of Home Economics33	Department of Computing Services
	Library System
Department of Clothing and Textiles	University of Alberta Archives
Department of Family Studies	•
Department of Foods and Nutrition	VP Research 72
Faculty of Law34	Interdisciplinary Research Units
	Boreal Institute for Northern Studies
	Canadian Institute of Ukrainian Studies
	Developmental Disabilities Center
	Devonian Botanic Garden
	Devolian Dulanic Garden

Agencie	es	CHF	Canadian Heart Foundation
AACEC	Alberta Advisory Committee For Educational Studios	CIBAC CIDA	Ciba-Corning Limited
AACES	Alberta Advisory Committee For Educational Studies	CMC	Canadian International Development Agency Communications Canada
AAEM AAIL	Alberta Advanced Education	COM	Cominco
AARN	Alberta Agriculture Industries Limited	CPRF	Canadian Psychiatric Research Foundation
AART	Alberta Association Of Registered Nurses	CPSYA	Canadian Psychological Association
ABA	Alberta Agricultural Research Trust Alberta Beekeepers Association	CRIAW	Canadian Research Institute For The Advancement Of
ACB	Alberta Cancer Board	01117111	Women
ACOC	Alberta College Of Chiropractors	CYAN	Cyanamid
ACOH	Alberta Community And Occupational Health	DBC	Dairy Bureau Of Canada
ACPMB	Alberta Chicken Producers' Marketing Board	DCF	Donner Canadian Foundation
ADA	Alberta Department Of Agriculture	DCL	Domecrete Canada Limited
AE	Alberta Environment	DEBIO	Debiopharm S A
AECC	Alberta Educational Communications Corporation	DINA	Department Of Indian And Northern Affairs
AECL	Atomic Energy Of Canada	DND	Department Of National Defence
AED	Alberta Education	DOCK	Gordon Docken Memorial Endowment
AEFMB	Alberta Egg And Fowl Marketing Board	DOW	Dow Chemical Canada Incorporated
AENCL	Alberta Energy Company Limited	DRIE	Department Of Regional Industrial Expansion
AENR	Alberta Energy	DUCKS	Ducks Unlimited Canada
AERT	Alberta Environmental Research Trust	DUP	Du Pont Canada Incorporated
AFDRT	Alberta Forest Development Research Trust	EBH	Edmonton Board Of Health
AFLCA	Alberta Fitness Leadership Certification Association	EC ECCO	Environment Canada Ecco Consultants Limited
AFLW	Alberta Forestry, Lands And Wildlife	ECECA	Edmonton Civic Employees' Charitable Assistance Fund
AFNR	Alberta Foundation For Nursing Research	EIC	Employment And Immigration Commission
AGCA	Agriculture Canada	EMRC	Energy, Mines And Resources Canada
AGR AHFMR	AGR Research Technology Limited	EPD	Edmonton Police Department
AICE	Alberta Heritage Foundation For Medical Research American Institute Of Chemical Engineers	ETHUR	Ethura/A Research And Consulting Company
AID	Aid Services Of Edmonton	FAS	Fitness And Amateur Sport
ALA	Alberta Lung Association	FINN	Finnish Sugar Limited
ALF	Alberta Law Foundation	FISON	Fisons Corporation Limited
AMHAC	Alberta Mental Health Advisory Council	FOC	Fisheries And Oceans Canada
AMUSA	Alberta Museums Association	GLAS	Gay And Lesbian Awareness Society
AOSTR	Alberta Oil Sands Technology And Research Authority	GNWT	Government Of The Northwest Territories
APPM	Alberta Pork Producers Marketing Board	GSC	Geological Survey Of Canada
ARC	Alberta Research Council	HLL	Hoffman-Laroche Limited
ARCA	Agriculture Research Council Of Alberta	HWC	Health And Welfare Canada
ARP	Alberta Recreation And Parks	IDRC	International Development Research Center
ARUM	Arum Geological Consultants Incorporated	IHCE	International Hockey Centre Of Excellence
AS	Arthritis Society	ILSI	International Life Sciences Institute - Risk Science Institute
ASC	Alberta Sport Council	IOL	Imperial Oil Limited
ASCHR	Alberta Special Crops And Horticultural Research Centre	IRPP	Institute For Research On Public Policy
ASSCH	Alberta Social Services And Community Health	JDF	Juvenile Diabetes Foundation
ATOUR	Alberta Transportation	JHSA	John Howard Society Of Alberta
ATOUR	Alberta Tourism	KFC	Kidney Foundation Of Canada
ATRT BDRC	Alberta Technology, Research And Telecommunications Black Dragon River Consortium	KIB	W K Kellogg Foundation
BIOM	Biomira Incorporated	KSC	Kellogg Salada Canada Incorporated
BIOSI	Biosis	LTI	Liposome Technology Incorporated
BNR	Bell-Northern Research Limited	MAXIS	Maxis Energy Canada Limited
BOE	Boeing Computer Services	MDA	Muscular Dystrophy Association Of Canada
BONIS	Bonis And Company Limited	MDBDF	March Of Dimes Birth Defects Foundation
BVI	Bow Valley Industries Limited	MERIE	Institut Merieux
CALBI	California Biotechnology Limited	MFC	Merck Frosst Canada Incorporated
CANG	Cangene Corporation	MILES	Miles Pharmaceuticals
CC	Canada Council	MISC	Miscellaneous Private Donations
CCA	Canadian Council Of Archives	MRC	Medical Research Council
CCC	Canola Council Of Canada	MSI MSS	MSI Foundation Multiple Sclerosis Society Of Canada
CCFF	Canadian Cystic Fibrosis Foundation	MUSC	Medical University Of South Carolina
CDA	Canadian Diabetes Association	NATO	North Atlantic Treaty Organization
CE	City Of Edmonton	NCI	National Cancer Institute Of Canada
CEMA	Canadian Egg Marketing Agency	NCOR	Novacor Chemicals Limited
CFAGS CFIC	Canadian Fund For Advancement Of General Surgery Canadian Foundation For Ileitis And Colitis	NORAC	Norac Technologies Incorporated
CFLRI	Canadian Foundation For fields And Collis Canadian Fitness And Lifestyle Research Institute	NORD	Nordic Laboratories Incorporated
CFS	Canadian Forestry Service	NORSK	Norsk Hydro
CFUS	Canadian Foundation For Ukrainian Studies	NOVA	Nova Corporation
CHEL	Canadian Hunter Exploration Limited	NRC	National Research Council Of Canada
CHEM	Chembiomed Limited	NSDME	
		NSERC	Natural Sciences And Engineering Research Council

ORTHO Ortho Pharmaceuticals Alberta Government Foundation/Trust Petroleum Aid To Education Trust Fund PAE **AART** Alberta Agricultural Research Trust **PALM** Palm Dairies-Cringle Foundation **AERT** Alberta Environmental Research Trust PENN Pennwalt Corporation **AFDRT** Alberta Forest Development Research Trust PPI Potash And Phosphate Institute AFNR Alberta Foundation For Nursing Research PRON Pro-Neuron Incorporated **AHFMR** Alberta Heritage Foundation For Medical Research **RPWF** Recreation, Parks And Wildlife Foundation **RPWF** Recreation, Parks And Wildlife Foundation RSI Risk Science Institute Canadian Government Agency SANDO Sandoz Agro Canada Incorporated **SCICA** Sci-Can Diagnostics Limited CC Canada Council Canadian Council Of Archives CCA SCL Syncrude Canada Limited **SEARL** CIDA Canadian International Development Agency Searle, G D And Company Of Canada Limited **SERAG** MRC Medical Research Council Seragen Incorporated SEWF NRC National Research Council Of Canada Samuel And Emma Winters Foundation **NSERC** Natural Sciences And Engineering Research Council SGC Solicitor General Canada SHELL Shell Canada Limited SSHRC Social Sciences And Humanities Research Council SHT Saskatchewan Highway And Transportation Canadian Government Crown Corporation SPC Sport Canada Atomic Energy Of Canada **AECL** SRC Swiss Red Cross SSC Secretary Of State Canada Canadian Government Department SSEF Steel Structures Education Foundation **AGCA** Agriculture Canada SSHRC Social Sciences And Humanities Research Council CFS Canadian Forestry Service STAT Statkraft CMC Communications Canada TAIHO Taiho Pharmaceuticals Limited DINA Department Of Indian And Northern Affairs **TAUC** Transalta Utilities Corporation DND Department Of National Defence TN Thomas/Newbound Department Of Regional Industrial Expansion DRIE UC University Of Calgary EC **Environment Canada UCEA** University Council For Educational Administration EIC **Employment And Immigration Commission ULTRA** Ultramar Oil And Gas Canada Limited **EMRC** Energy, Mines And Resources Canada UOL University of London (England) Fitness And Amateur Sport FAS UPJ Upjohn Company Of Canada Fisheries And Oceans Canada FOC USAF U S Air Force Geological Survey Of Canada GSC **USDA** U S Department Of The Army Health And Welfare Canada **HWC USFS** United States Forest Service SGC Solicitor General Canada **USNIH** U S Public Health Services SPC Sport Canada UVA University of Virginia SSC Secretary Of State Canada University Of Winnipeg **UWIN WCOF** Western Co-Operative Fertilizers Limited Canadian Government Foundation/Trust WGRF Western Grains Research Foundation **BDRC** Black Dragon River Consortium WMJ WMJ Metals Limited **CFLRI** Canadian Fitness And Lifestyle Research Institute **WWFC** World Wildlife Fund Canada **IDRC** International Development Research Center **ZEISS** Zeiss, Carl Canada Limited Canadian Private Association/Society **AACES** Alberta Advisory Committee For Educational Studies **Agencies by Category** AARN Alberta Association Of Registered Nurses ABA Alberta Beekeepers Association ACOC Alberta Government Agency Alberta College Of Chiropractors **ACPMB** Alberta Chicken Producers' Marketing Board ACB Alberta Cancer Board **AEFMB** Alberta Egg And Fowl Marketing Board **AMHAC** Alberta Mental Health Advisory Council **AFLCA** Alberta Fitness Leadership Certification Association **ARCA** Agriculture Research Council Of Alberta AID Aid Services Of Edmonton Alberta Government Crown Corporation ALA Alberta Lung Association AECC Alberta Educational Communications Corporation **AMUSA** Alberta Museums Association APPM **AOSTR** Alberta Oil Sands Technology And Research Authority Alberta Pork Producers Marketing Board ARC Alberta Research Council Arthritis Society AS **ASC** Canola Council Of Canada Alberta Sport Council CCC CCFF Canadian Cystic Fibrosis Foundation Alberta Government Department Canadian Diabetes Association CDA **AAEM** Alberta Advanced Education **CEMA** Canadian Egg Marketing Agency **ACOH** Alberta Community And Occupational Health **CPSYA** Canadian Psychological Association Alberta Department Of Agriculture ADA **CRIAW** Canadian Research Institute For The Advancement Of ΑE Alberta Environment Women AED Alberta Education DBC Dairy Bureau Of Canada **AENR** Alberta Energy **DUCKS Ducks Unlimited Canada AFLW** Alberta Forestry, Lands And Wildlife **GLAS** Gay And Lesbian Awareness Society **ARP** Alberta Recreation And Parks **IRPP** Institute For Research On Public Policy **ASSCH** Alberta Social Services And Community Health **JHSA** John Howard Society Of Alberta AΤ Alberta Transportation MDA Muscular Dystrophy Association Of Canada **ATOUR** Alberta Tourism MSS Multiple Sclerosis Society Of Canada **ATRT** Alberta Technology, Research And Telecommunications NCI National Cancer Institute Of Canada

PPI Potash And Phosphate Institute Western Co-Operative Fertilizers Limited **WCOF** WMJ WMJ Metals Limited Canadian Private Donor **ZEISS** Zeiss, Carl Canada Limited **DOCK** Gordon Docken Memorial Endowment MISC Miscellaneous Private Donations Foreign Govt. Agency/Foundation/Dept. TN Thomas/Newbound SRC Swiss Red Cross UOL University of London (England) Canadian Private Foundation/Trust ALF Alberta Law Foundation Foreign Private Agency/Foundation/Donor **CFAGS** Canadian Fund For Advancement Of General Surgery MERIE Institut Merieux **CFIC** Canadian Foundation For Ileitis And Colitis Foreign Private Industry/Business **CFUS** Canadian Foundation For Ukrainian Studies FINN Finnish Sugar Limited CHF Canadian Heart Foundation NORSK **CPRF** Norsk Hydro Canadian Psychiatric Research Foundation STAT Statkraft DCF Donner Canadian Foundation **ECECA** Edmonton Civic Employees' Charitable Assistance Fund Multi-National Agency **KFC** Kidney Foundation Of Canada IHCE International Hockey Centre Of Excellence MSI MSI Foundation NATO North Atlantic Treaty Organization **PALM** Palm Dairies-Cringle Foundation Samuel And Emma Winters Foundation **SEWF** Other Canadian University **SSEF** Steel Structures Education Foundation University Of Calgary UC WGRF Western Grains Research Foundation **UWIN** University Of Winnipeg **WWFC** World Wildlife Fund Canada Other Government - Municipal Canadian Private Industry/Business City Of Edmonton CE Alberta Agriculture Industries Limited AAIL **EBH** Edmonton Board Of Health **AENCL** Alberta Energy Company Limited **EPD** Edmonton Police Department AGR Research Technology Limited AGR SHT Saskatchewan Highway And Transportation **ARUM** Arum Geological Consultants Incorporated **ASCHR** Alberta Special Crops And Horticultural Research Centre Other Govt. Agency/Foundation/Dept. **BIOM** Biomira Incorporated **GNWT** Government Of The Northwest Territories BNR Bell-Northern Research Limited Nova Scotia Department Of Mines And Energy **NSDME** BOE **Boeing Computer Services** Bonis And Company Limited US Govt. Agency/Foundation/Dept. **BONIS** BVI Bow Valley Industries Limited **USAF** US Air Force **CANG** Cangene Corporation **USDA** U S Department Of The Army CHEL Canadian Hunter Exploration Limited **USFS** United States Forest Service CHEM Chembiomed Limited **USNIH** U S Public Health Services CIBAC Ciba-Corning Limited UVA University of Virginia COM Cominco US Private Agency/Foundation/Donor Cyanamid **CYAN** AICE American Institute Of Chemical Engineers DCL Domecrete Canada Limited **DEBIO** Debiopharm S A ILSI International Life Sciences Institute - Risk Science Institute DOW Dow Chemical Canada Incorporated JDF Juvenile Diabetes Foundation DUP Du Pont Canada Incorporated **MDBDF** March Of Dimes Birth Defects Foundation **ECCO** Ecco Consultants Limited MUSC Medical University Of South Carolina **ETHUR** Ethura/A Research And Consulting Company RSI Risk Science Institute **FISON** Fisons Corporation Limited **UCEA** University Council For Educational Administration Hoffman-Laroche Limited HLL IOL Imperial Oil Limited US Private Industry/Business **KSC** Kellogg Salada Canada Incorporated BIOSI **Biosis** LTI Liposome Technology Incorporated **CALBI** California Biotechnology Limited **MAXIS** Maxis Energy Canada Limited W K Kellogg Foundation KIB MFC Merck Frosst Canada Incorporated PENN Pennwalt Corporation **MILES** Miles Pharmaceuticals **SERAG** Seragen Incorporated **NCOR Novacor Chemicals Limited NORAC** Norac Technologies Incorporated **NORD** Nordic Laboratories Incorporated **Award Codes** NOVA Nova Corporation **ORTHO** Ortho Pharmaceuticals

CFC	Conference Grant
CTR	Contract Research
EQP	Equipment Grant
INF	Infrastructure Grant
OPR	Operating Grant
PRZ	Research Prize
TTR	Technology Transfer Grant
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SCL

Petroleum Aid To Education Trust Fund

Searle, G D And Company Of Canada Limited

Sandoz Agro Canada Incorporated

Pro-Neuron Incorporated

Sci-Can Diagnostics Limited

Taiho Pharmaceuticals Limited

Ultramar Oil And Gas Canada Limited

Transalta Utilities Corporation

Upjohn Company Of Canada

Syncrude Canada Limited

Shell Canada Limited

Faculty of Agriculture and Forestry

Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	2,645	AHFMR	1	\$	47,638	
Contracts	31		916,048	NSERC	54	\$	1,693,484	
Equipment	6	\$	132,268	Other Provincial	72	\$	1,705,458	
Operating	142		502,430	Other Federal	15	\$	420,826	
Total	180	\$ 4,	553,391	Other Agencies	38	\$	685,985	
				Total	180	\$	4,553,391	
culty of Agriculture and	-				Award		Amount	Agonov
restigator	Project 7	ille			Award		Amount	Agency
an	41.			la sias is Albanta	ODD	Φ	150,000	NOCDO
Genetic variation and adapta				jepole pine in Alberta	OPR	\$	150,000	NSERC
Transitional forestry support	-	base 1	tunds		OPR	\$	75,000	NSERC
Forest sciences-forest ecopl	hysiology				OPR	\$	219,471	NSERC
Operating				NSERC	3	\$	444,471	
partment of Agricultural	l Engine	_			Award		Amount	Agency
ch, L								
						-	4 4 = 4 4	
of mechanical loading mier, K W				d products under various modes	OPR	\$	11,520	NSERC
of mechanical loading mier, K W Co-investigator with Roberts	son, J A (Sc	il Scien	nce): Residua					
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u	son, J A (So urea super (il Scien granule:	nce): Residua s		OPR	\$	11,000	AART
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of the Metering and placement of the Metering and placement of the Metering and placement.	son, J A (So urea super (urea super (il Scien granule: granule:	nce): Residua s s	al effects of previously	OPR OPR	\$ \$	11,000 10,000	AART NORSK
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Metering and placement of u Energy requirements for pre	son, J A (So urea super q urea super q eumatic trar	il Scien granule: granule: asport o	nce): Residua s s s f granular fel	al effects of previously	OPR	\$	11,000	AART NORSK
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Metering and placement of u Energy requirements for pre Co-investigator with Lindwal	son, J A (So urea super q urea super q eumatic trar	il Scien granule: granule: asport o	nce): Residua s s s f granular fel	al effects of previously	OPR OPR	\$ \$	11,000 10,000	AART NORSK
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Metering and placement of u Energy requirements for pre Co-investigator with Lindwal	son, J A (Sourea super (urea super (eumatic tran II, C W: Higl	il Scien granule: granule: nsport on press	nce): Residua s s s of granular fel ure fertilizer i	al effects of previously rtilizer injection	OPR OPR	\$ \$	11,000 10,000	AART NORSK
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of the Metering and placement of the Energy requirements for pre Co-investigator with Lindwal Ides, J J Co-investigator with Young,	son, J A (Sourea super qurea super quumatic trar II, C W: High	il Scien granule: granule: nsport on press al Scien	nce): Residua s s of granular fe ure fertilizer i ce): Thermoo	al effects of previously rtilizer injection dynamics in overwintering	OPR OPR OPR	\$ \$	11,000 10,000 7,220	AART NORSK NSERC
of mechanical loading nier, K W Co-investigator with Roberts Metering and placement of the Metering and placement of the Energy requirements for preciously co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recircular with the Mechanical Ides of the Mechanical Idea of the Mechan	son, J A (Sourea super (urea super (eumatic trar II, C W: Hig B A (Anima culation duc	il Scien granule: granule: nsport on press il Scien et syster	nce): Residua s s s of granular fe ure fertilizer i nce): Thermoo ms for livesto	al effects of previously rtilizer injection dynamics in overwintering	OPR OPR OPR	\$ \$ \$	11,000 10,000 7,220 21,000	AART NORSK NSERC
of mechanical loading nier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in comi	son, J A (Sourea super (urea super (eumatic trar II, C W: Hig B A (Anima culation duc	il Scien granule: granule: nsport on press il Scien et syster	nce): Residua s s s of granular fe ure fertilizer i nce): Thermoo ms for livesto	al effects of previously rtilizer injection dynamics in overwintering	OPR OPR OPR OPR	\$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000	AART NORSK NSERC ADA ARCA
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in comi	son, J A (Sourea super (urea super (eumatic tran II, C W: Higl B A (Anima culation duc mercial turk	iil Scien granule: granule: nsport on press al Scien at syster ey rear	nce): Residuals s s of granular fer ure fertilizer i uce): Thermod ms for livesto ring facilities	al effects of previously rtilizer injection dynamics in overwintering	OPR OPR OPR OPR OPR EQP	\$ \$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245	AART NORSK NSERC ADA ARCA NSERC
of mechanical loading nier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in comi Ammonia infrared analyzer Dust removal from animal he	son, J A (Sourea super (urea super (eumatic tran II, C W: Higl B A (Anima culation duc mercial turk	iil Scien granule: granule: nsport on press al Scien at syster ey rear	nce): Residuals s s of granular fer ure fertilizer i uce): Thermod ms for livesto ring facilities	al effects of previously rtilizer injection dynamics in overwintering	OPR OPR OPR OPR	\$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000	AART NORSK NSERC ADA ARCA NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heroard, J J	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Anima culation duc mercial turk ousing by v	iil Scien granule: granule: nsport on press al Scien et syster ey rear entilatio	nce): Residuals s s of granular fer ure fertilizer i uce): Thermod ms for livesto ring facilities	al effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR OPR EQP	\$ \$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245	AART NORSK NSERC ADA ARCA NSERC
of mechanical loading nier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heroard, J J Co-investigator with Feddes	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Anima culation duc mercial turk ousing by v	iil Scien granule: granule: nsport on press al Scien tt syster ey rear entilation	nce): Residuals s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for reconstant of the second of the s	al effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245 15,891	AART NORSK NSERC ADA ARCA NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal horard, J J Co-investigator with Feddes Measurement of humidity of	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Anima culation duc mercial turk ousing by v	iil Scien granule: granule: nsport on press al Scien tt syster ey rear entilation	nce): Residuals s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for reconstant of the second of the s	al effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR OPR EQP	\$ \$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245	AART NORSK NSERC ADA ARCA NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal head Donard, J J Co-investigator with Feddes Measurement of humidity of dwall, C W	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Anima culation duc mercial turk ousing by v s, J J: Desig f agricultura	iil Scien granule: granule: nsport on press al Scien tt syster ey rear entilation n parar I enviro	nce): Residuals s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for reconstant of the second of the s	al effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245 15,891	AART NORSK NSERC ADA ARCA NSERC NSERC
of mechanical loading nier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heading, J J Co-investigator with Feddes Measurement of humidity of Idwall, C W High pressure fertilizer inject	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Anima culation duc mercial turk ousing by v s, J J: Desig f agricultura	iil Scien granule: granule: nsport on press al Scien tt syster ey rear entilation n parar I enviro	nce): Residuals s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for reconstant of the second of the s	al effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245 15,891	AART NORSK NSERC ADA ARCA NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal ddes, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heading J Co-investigator with Feddes Measurement of humidity of dwall, C W High pressure fertilizer inject Quitty, J B Use of indirect calorimetry to	son, J A (Sourea super of the s	il Scien granule: granule: nsport on press al Scien et syster ey rear entilation n parar I enviro	nce): Residuals s s of granular fer ure fertilizer i nce): Thermore ms for livestoring facilities on meters for recomments	al effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR EQP OPR	\$ \$ \$ \$ \$ \$ \$ \$	11,000 10,000 7,220 21,000 32,000 11,245 15,891	AART NORSK NSERC ADA ARCA NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal ddes, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal he conard, J J Co-investigator with Feddes Measurement of humidity of ddwall, C W High pressure fertilizer inject Quitty, J B Use of indirect calorimetry to facilities	son, J A (Sourea super of the s	il Scien granule: granule: nsport on press al Scien et syster ey rear entilation n parar I enviro	nce): Residuals s s of granular fer ure fertilizer i nce): Thermore ms for livestoring facilities on meters for recomments	at effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR OPR OPR	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	11,000 10,000 7,220 21,000 32,000 11,245 15,891 15,416 14,479	AART NORSK NSERC ADA ARCA NSERC NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal ddes, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal he conard, J J Co-investigator with Feddes Measurement of humidity of dwall, C W High pressure fertilizer inject Quitty, J B Use of indirect calorimetry to	son, J A (Sourea super of the s	il Scien granule: granule: nsport on press al Scien t system ey rear entilation n parar I enviro	nce): Residuals s s of granular fer ure fertilizer i nce): Thermore ms for livestoring facilities on meters for recomments	at effects of previously rtilizer injection dynamics in overwintering ock building ventilation	OPR OPR OPR OPR OPR OPR	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	11,000 10,000 7,220 21,000 32,000 11,245 15,891 15,416 14,479	AART NORSK NSERC ADA ARCA NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal ddes, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heading of the common of the	son, J A (Sourea super of the s	il Scien granule: granule: nsport on press al Scien tt syster ey rear entilation n parar I enviro	nce): Residuals s s of granular fer ure fertilizer i uce): Thermore ms for livestoring facilities on meters for recomments heat production	rtilizer injection dynamics in overwintering ock building ventilation circulation ion in commercial confinement	OPR	\$\$\$ \$\$\$\$ \$\$\$\$	11,000 10,000 7,220 21,000 32,000 11,245 15,891 15,416 14,479 11,600 19,640 <i>Amount</i>	AART NORSK NSERC ADA ARCA NSERC NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal Ides, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heading J Co-investigator with Feddes Measurement of humidity of dwall, C W High pressure fertilizer inject Quitty, J B Use of indirect calorimetry to facilities Eko, M M Mixed species - wood fibre for	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Animal culation duc mercial turk ousing by v s, J J: Desig f agricultural trion system to measure a furnish qual	il Scien granule: granule: nsport on press al Scien at syster ey rear entilation parar I enviro animal I	nce): Residuals s s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for recomments heat production and the mount 19,640	rtilizer injection	OPR	\$\$\$\$ \$\$\$\$ \$\$\$\$	11,000 10,000 7,220 21,000 32,000 11,245 15,891 15,416 14,479 11,600 19,640 <i>Amount</i> 87,371	AART NORSK NSERC ADA ARCA NSERC NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal ddes, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal heading of the contracts Measurement of humidity of the dwall, C W High pressure fertilizer inject Guitty, J B Use of indirect calorimetry to facilities cko, M M Mixed species - wood fibre of Type of Award Contracts Equipment	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Anima culation duc mercial turk ousing by v s, J J: Desig f agricultura etion system to measure a furnish qual No.	il Scien granule: granule: nsport on press al Scien at syster ey rear entilation parar I enviro animal I	nce): Residuals s s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for recomments heat production and the mount 19,640 11,245	rtilizer injection	OPR	***	11,000 10,000 7,220 21,000 32,000 11,245 15,891 15,416 14,479 11,600 19,640 <i>Amount</i> 87,371 83,640	AART NORSK NSERC ADA ARCA NSERC NSERC NSERC
of mechanical loading mier, K W Co-investigator with Roberts Metering and placement of u Energy requirements for pne Co-investigator with Lindwal ddes, J J Co-investigator with Young, Design parameters for recirc A study of air quality in come Ammonia infrared analyzer Dust removal from animal he conard, J J Co-investigator with Feddes Measurement of humidity of dwall, C W High pressure fertilizer inject Quitty, J B Use of indirect calorimetry to facilities cko, M M Mixed species - wood fibre for	son, J A (Sourea super (urea super (eumatic tran II, C W: High B A (Animal culation duc mercial turk ousing by v s, J J: Desig f agricultural trion system to measure a furnish qual	il Scien granule: granule: nsport on n press al Scien at syster ey rear entilation n parar I enviro animal I	nce): Residuals s s s of granular fer ure fertilizer ince): Thermooms for livestoring facilities on meters for recomments heat production and the mount 19,640	rtilizer injection	OPR	\$\$\$\$ \$\$\$\$ \$\$\$\$	11,000 10,000 7,220 21,000 32,000 11,245 15,891 15,416 14,479 11,600 19,640 <i>Amount</i> 87,371	AART NORSK NSERC ADA ARCA NSERC NSERC NSERC

Department of Animal Science

Investigator Project Title	Award	Amount	Agency
Aherne, F X			
Influence of feed level and body condition between weaning and mating or performance	·	,	AART
Nutritive value of spring triticale in hog diets	CTR \$		ADA
Research trial to test the validity of 1987 NRC nutrient requirements for gelactation of sows for Alberta feeds and conditions	station and CTR \$	10,000	ADA
Research trial to evaluate culled great northern beans as a protein suppler rations	nent for pig starter CTR \$	5,000	ADA
An evaluation of the nutritive value of a new hulless barley variety for swine	e CTR \$	5,000	ADA
The effects of prepubertal nutrition on the onset of puberty and ovulation ra	ate in gilts OPR \$	36,575	ARCA
The etiology of degenerative joint abnormalities and leg weakness in swine	OPR \$	35,682	NSERC
Baracos, V E	ODD 4	40.000	ADCA
Protein metabolism during fever and infection in domestic livestock	OPR \$		ARCA
Regulation of protein metabolism in the tumor-bearing host	OPR \$		NCI
Control of growth and atrophy of skeletal muscle	OPR \$	16,000	NSERC
Co-investigator with Christopherson, R J: Evaporator-concentrator-dryer			000
Effects of trauma and athletic therapy on growth and atrophy of skeletal mules Berg, R T			SPC
Efficiency models in cow calf systems Christopherson, R J	OPR \$	12,000	ARCA
Influence of temperature on protein and amino acid digestion in ruminants	OPR \$	30,000	ARCA
Animal physiology research	OPR \$	16,626	HLL
Control of digestion and metabolism in animals	OPR \$	39,800	NSERC
Evaporator-concentrator-dryer	EQP \$	13,505	NSERC
de Boer, G			
Co-investigator with Kennelly, J J: Sustained-release BST studies in			
Hudson, R J	OPR \$	24,000	NSERC
Ecological bioenergetics of wild ruminants Kennelly, J J	Orn \$	24,000	NOENC
Growth hormone for dairy cattle - mode of action and effect on milk productive perfomance	tion and OPR \$	75,000	ARCA
Factors influencing the efficiency of protein (amino acids) and energy utiliz cows	ation by dairy OPR \$	62,000	ARCA
Effect of jet-sploding and extrusion on the nutritive value of canola meal ar seed for dairy cattle		30,000	CCC
Recombinant bovine somatotropin study at Oyster River, British Columbia	CTR \$	56,442	CYAN
Sustained-release BST studies in Canada	CTR \$	73,652	CYAN
Co-investigator with Christopherson, R J: Evaporator-concentrator-dryer			
Leonard, J J			
Co-investigator with Young, B A: Thermodynamics in overwintering Makarechian, M			
Co-investigator with Price, M A: Studies on the molecular genetics Mathison, G W			
Influence of grain processing and method of feeding on the nutritive value	of barley CTR \$	21,000	ADA
Yield, preservation and nutritive value of moist hay	OPR \$		ARCA
Improving the nutritive value of straw	OPR \$	•	ARCA
Energy efficiencies of ruminants	OPR \$		ARCA
Price, M A	•		
Animal Science Endowment Research	OPR \$	16,024	AAIL
Studies on the molecular genetics and endocrinological basis of muscle gr muscled cattle	owth in double OPR \$	20,000	ARCA
Robinson, F E			4.0.01.10
Poultry Research Centre	OPR \$		ACPMB
Poultry Research Centre	OPR \$	10,000	AEFMB
Co-investigator with Christopherson, R J: Evaporator-concentrator-dryer .	• •		
Salmon, R K Co investigator with Price M A: Studies on the molecular genetics			
Co-investigator with Price, M A: Studies on the molecular genetics	OPR \$	25,000	ARCA
Endocrinological and genetic analysis of superior growth in cattle Co-investigator with Hodgetts, R B (Science, Genetics): Molecular genetic		25,000	AIIOA

Investigator		Project T	itle			Award		Amount	Agency
Sauer, W C								-	
	ination of the nutritive	e value of be	eans	peas and lenti	ls for pigs	CTR	\$	13,918	ADA
Determ	ination of amino acid			•	ope dilution technique in	OPR	\$	40,750	ARCA
feedstu	ffs for pigs								
	ect of anti-nutritional	factors on p	ancr	eatic enzyme se	ecretion and amino acid nutrition	OPR	\$	29,043	NSERC
in pigs									
Sim, J S						ODD	Φ	1 000	A O D
	inology research					OPR	\$	1,000	AGR
	lk product developme					CTR	\$	68,626	CEMA
	an barley utilization fo					OPR	\$	27,600	FINN
	lic fate of ovo-choles	_				OPR	\$	15,000	NSERC
	separation from egg	g yolk by aqı	ueou	is extraction me	thod	OPR	\$	50,000	NSERC
hompson, J						ODD	Φ	10,000	NOCEO
	turnover in skeletal r				And a decide	OPR	\$	16,000	NSERC
oung, B A	estigator with Christor	onerson, H	J: EV	aporator-conce	ntrator-dryer				
	ndvnamics in overwin	terina hee a	olon	ies An interdisc	ciplinary research program	OPR	\$	9,000	AART
	g university departme					0111	Ψ	5,000	ANTH
				•	ciplinary research program	OPR	\$	9.000	ABA
	g university departme					0111	Ψ	3,000	/\D/\
	and between breed v			,		OPR	\$	35,000	ARCA
	ant nutrition - IAEA Fe					OPR	\$	6,000	CIDA
	mentally induced add					OPR	φ \$	15,000	NSERC
LIMIO	montany muuceu au	apave chall	y c o I	wiioic-aliillal	metabolistii	Orn	Ψ	15,000	NOLITO
Type o	f Award	No.		Amount	Source of Funds	No.		Amount	
Contrac	cts	9	\$	258,638	NSERC	10	\$	254,030	
Equipm		1	\$	13,505	Other Provincial	21	\$	550,512	
Operati	ng	35	\$	883,797	Other Federal	2	\$	17,630	
Total		45	\$	1,155,940	Other Agencies Total	12	\$	333,768	
					i Otal	45	\$	1,133,370	
					Total	40	Ф	1,155,940	
Departmen	t of Entomology	/			1014	43	Þ	1,100,540	
=	t of Entomology	/ Project T	ītle		1314	Aw ard	4	Amount	Agency
nvestigator Ball, G E			ītle			Award	→		Agency
nvestigator Ball, G E Studies	t of Entomology		- itle				\$		Agency NSERC
eall, G E Studies Staig, D A	in insect taxonomy		ītle			Award OPR	\$	<i>Amount</i> 48,000	NSERC
nvestigator all, G E Studies raig, D A Biology			ītle_			Award		Amount	
nvestigator all, G E Studies raig, D A Biology vans, W G	in insect taxonomy of aquatic insects	Project T		ence\: Thermod		Award OPR	\$	<i>Amount</i> 48,000	NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve	in insect taxonomy of aquatic insects estigator with Young,	Project T	l Sci		ynamics in overwintering	Award OPR	\$	<i>Amount</i> 48,000	NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan,	Project T	l Sci			Award OPR	\$	<i>Amount</i> 48,000	NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory	Project T B A (Anima R B (Science	l Sci ce, C	Chemistry): Mas	ynamics in overwintering	Award OPR OPR	\$	Amount 48,000 20,000	NSERC NSERC
ratestigator all, G E Studies raig, D A Biology vans, W G Co-inve Co-inve laborate Chemic	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan,	Project T B A (Anima R B (Science	l Sci ce, C	Chemistry): Mas	ynamics in overwintering	Award OPR	\$	<i>Amount</i> 48,000	NSERC
sall, G E Studies Stall, D A Biology Svans, W G Co-inve Laborate Chemic	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato	Project T B A (Anima R B (Science) Dry soil insections	l Sci ce, C	Chemistry): Mas	ynamics in overwintering	Award OPR OPR	\$	Amount 48,000 20,000	NSERC NSERC
studies Studies Studies Stail, G E Studies Staig, D A Biology Svans, W G Co-inve laborate Chemic Seddes, J J Co-inve	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young,	Project T B A (Anima R B (Science) Dry soil insect B A (Anima	l Sci ce, C ct gu I Sci	Chemistry): Mas uilds ence): Thermod	lynamics in overwintering s spectometry service	Award OPR OPR	\$	Amount 48,000 20,000	NSERC NSERC
studies Studies Studies Studies Staig, D A Biology Svans, W G Co-invel laborate Chemic Ceddes, J J Co-invel Gooding, R H Tryptop	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young,	Project T B A (Anima R B (Science) Dry soil insect B A (Anima	l Sci ce, C ct gu I Sci	Chemistry): Mas uilds ence): Thermod	lynamics in overwintering s spectometry service	Award OPR OPR	\$	Amount 48,000 20,000	NSERC NSERC
studies Studies Studies Studies Staig, D A Biology Svans, W G Co-invel laborate Chemic Seddes, J J Co-invel Gooding, R H Tryptop morsita	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young,	Project T B A (Anima R B (Science) Dry soil insect B A (Anima	l Sci ce, C ct gu I Sci	Chemistry): Mas uilds ence): Thermod	lynamics in overwintering s spectometry service	Award OPR OPR	\$ \$ \$	Amount 48,000 20,000	NSERC NSERC NSERC
rivestigator all, G E Studies straig, D A Biology vans, W G Co-inve laborate Chemic eddes, J J Co-inve tooding, R H Tryptop morsita leming, B S	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep	Project T B A (Anima R B (Science ory soil insect B A (Anima production an	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in t	lynamics in overwintering s spectometry service	Award OPR OPR OPR	\$ \$ \$	Amount 48,000 20,000 10,000 38,000	NSERC NSERC NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve laborate Chemic eddes, J J Co-inve cooding, R H Tryptop morsita eming, B S Studies	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young,	Project T B A (Anima R B (Science ory soil insect B A (Anima production an	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in t	lynamics in overwintering s spectometry service	Award OPR OPR	\$ \$ \$	Amount 48,000 20,000	NSERC NSERC NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve laborate chemic eddes, J J Co-inve sooding, R H Tryptop morsita eming, B S Studies litchell, B K	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep	Project T B A (Anima R B (Science ory soil insectory soil insectory soil insectory and the control of the cont	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in t	lynamics in overwintering s spectometry service	Award OPR OPR OPR	\$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123	NSERC NSERC NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve laborate chemic eddes, J J Co-inve ooding, R H Tryptop morsita eming, B S Studies litchell, B K Studies	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep	Project T B A (Anima R B (Science ory soil insectory soil insectory soil insectory and the control of the cont	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in t	lynamics in overwintering s spectometry service	Award OPR OPR OPR	\$ \$ \$	Amount 48,000 20,000 10,000 38,000	NSERC NSERC NSERC
all, G E Studies raig, D A Biology vans, W G Co-inve laborate chemic eddes, J J Co-inve coding, R H Tryptop morsita eming, B S Studies litchell, B K Studies pence, J R	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep	B A (Anima R B (Science B A (Anima production and unction, and eption	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in to ogeny	lynamics in overwintering s spectometry service lynamics in overwintering	Award OPR OPR OPR	\$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123	NSERC NSERC NSERC
rail, G E Studies raig, D A Biology vans, W G Co-inve laborate Chemic eddes, J J Co-inve morsita eming, B S Studies litchell, B K Studies pence, J R Host ef	e in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep ins) in insect structure, for	Project T B A (Anima R B (Science ory soil insectory soil insectory B A (Anima production and unction, and eption d behaviour	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in to ogeny	lynamics in overwintering s spectometry service lynamics in overwintering	Award OPR OPR OPR OPR	\$ \$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123 20,836	NSERC NSERC NSERC NSERC NSERC
Rational Articles Part of the microstration of the microstrate of the	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep ins) in insect structure, for it is on insect chemorece fects on genetics and is in insect population	B A (Anima R B (Science ory soil insection and unction, and eption displaying behaviour biology	I Sci ce, C ct gu Il Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in too ogeny e mountain pine	lynamics in overwintering s spectometry service lynamics in overwintering	Award OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123 20,836 9,521	NSERC NSERC NSERC NSERC NSERC AFDRT
Rational Studies Gall, G E Studies Craig, D A Biology Evans, W G Co-inversity Chemic Feddes, J J Co-inversity Gooding, R H Tryptop morsita Heming, B S Studies Altchell, B K Studies Gence, J R Host ef Studies Co-inversity	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep ins) in insect structure, for it is on insect chemorece fects on genetics and is in insect population	B A (Anima R B (Science ory soil insection and unction, and eption displaying behaviour biology	I Sci ce, C ct gu Il Sci nd h	Chemistry): Mas uilds ence): Thermod ybrid sterility in too ogeny e mountain pine	lynamics in overwintering s spectometry service lynamics in overwintering the tsetse fly (Glossina	Award OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123 20,836 9,521	NSERC NSERC NSERC NSERC NSERC AFDRT
Remarks of the studies of the studie	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep ens) in insect structure, for in on insect chemorece fects on genetics and in insect population estigator with Dean (A	Project T B A (Anima R B (Science Dry soil insect B A (Anima Production and Project T	I Sci ce, C ct gu I Sci nd h	Chemistry): Mas iilds ence): Thermod ybrid sterility in the ogeny e mountain pine Forestry): Genet Amount	lynamics in overwintering s spectometry service lynamics in overwintering	Award OPR OPR OPR OPR OPR OPR OPR OP	\$ \$ \$ \$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123 20,836 9,521 27,500 Amount	NSERC NSERC NSERC NSERC NSERC AFDRT
Residence of the studies of the stud	in insect taxonomy of aquatic insects estigator with Young, estigator with Jordan, ory cal ecology of predato estigator with Young, whan metabolism, rep ens) in insect structure, for in on insect chemorece fects on genetics and in insect population estigator with Dean (A	Project T B A (Anima R B (Science Dry soil insect B A (Anima Production and Project T	I Sci ce, C ct gu Il Sci nd h	Chemistry): Mas iilds ence): Thermod ybrid sterility in the ogeny e mountain pine Forestry): Genet	lynamics in overwintering s spectometry service lynamics in overwintering	Award OPR OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	Amount 48,000 20,000 10,000 38,000 7,123 20,836 9,521 27,500	NSERC NSERC NSERC NSERC NSERC AFDRT

Department of Food Science

Investigator	Project T	itle			Award		Amount	Agency
elen, P						_		Ψ.
Ultrafiltration of cottage	•		• •		OPR	\$	8,252	AART
Properties, reactions ar	nd nutritional asp	ects	of cheese whe	y and its components	OPR	\$	29,124	NSERC
Ultrafiltration of cottage	cheese whey for	r nev	v dairy products	s' use	OPR	\$	8,500	PALM
e Maguer, M								
Optimization of a conta				d vegetable materials	OPR	\$	10,000	BDRC
Migration of solutes dur oraikul, B	ing water remova	al in	foodstuffs		OPR	\$	21,000	NSERC
Co-investigator with Pa	lcic M.M. Enzym	ne in	hibitors - ultrace	entifuae				
Immobilization technolo					OPR	\$	42,000	ARCA
zimek, L	gy for according	Ju Ce	inola sauce len	Heritation	OFR	φ	42,000	ANCA
Co-investigator with Still	les, M E: Feasibi	lity o	f lactic acid sta	rter				
Co-investigator with Stil								
alcic, M M			•	S .				
Enzyme inhibitors - ultra					EQP	\$	47,638	AHFMF
Co-investigator with Oo	raikul, B: Immobi	ilizat	ion technology	for accelerated				
	ndsgaul, O (Scier	nce,	Chemistry): De	velopment of ELISA assays				
for								
Isotopic and stereocher	-				OPR	\$	21,696	NSERC
Co-investigator with Stil	es, M E: Ultra-lo	w te	rmperature stor	age				
oorns, P	laia M.M. Caare	:		and to an a				
Co-investigator with Pa	-				000	•	44.000	NOEDO
Study of glycosyltransfe					OPR	\$	14,600	NSERC
Co-investigator with Stil	es, M E: Ultra-lo	w te	mperature stor	age				
Microbiological safety o	f sandwiches sto	redi	in modified atm	osnheres	OPR	\$	10,000	ADA
Co-investigator with Pal				The state of the s	Orn	Ψ	10,000	ADA
Use of biotechnology to				· ·	OPR	\$	41,000	ARCA
Feasibility of lactic acid				servation of meats		Φ \$	33,000	ARCA
Survival of enterobacter	•			vatama	OPR			
		Dat	dena in meat s	ystems	OPR	\$	13,177	NSERC
Ultra-low termperature solfe, F H	storage freezer				EQP	\$	8,942	NSERC
Multi-component testing	1				OPR	\$	20,000	ADA
Co-investigator with Pal		ne inl	nibitors - ultrace	entifuge	· · · · ·	*	_0,000	,,
——————————————————————————————————————	-			nal properties of meat emulsions	OPR	\$	36,000	ARCA
	_			scheme for Alberta milk	OPR	\$	34,000	ARCA
	mar formala ma		mponom phom	J Scheme for Alberta milk	0111	Ψ	34,000	AHOA
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Equipment		\$	56,580	AHFMR	1	\$	47,638	
Operating		\$	342,349	NSERC	6	\$	108,539	
Total	17	\$	398,929	Other Provincial	8	\$	224,252	
				Other Federal	1	\$	10,000	
				Other Agencies Total	1 17	\$ \$	8,500	
				rotai	17	Ф	398,929	

Department of Forest Science

Investigator	Project Title	Award	Amount	Agency
Beck, J A			1-W-	
	easure 30 permanent sample plots and perform necessary maintenance on 100 other nanent sample plots located throughout Alberta	CTR	\$ 40,000	AENR
Estal	blishment of 1500 fixed area plots and detailed stem analysis of 500 trees	CTR	\$ 20,000	AENR
Main	tenance work on 50 sample plots	CTR	\$ 15,000	AENR
Stem	n analyses	CTR	\$ 20,000	AENR
Analy	ysis of phase 3 cover type	CTR	\$ 7,000	AFLW
Oper	rational inventory evaluation	CTR	\$ 16,000	AFLW
Butler, J R				
Habit	tat selection and ploygyny in the House Wren	OPR	\$ 1,750	EC
Ampl Cheliak, W	hibians and reptiles of Alberta M	OPR	\$ 8,000	RPWF
Évalu	uation of heterozygosity and performance in pedigreed tree populations	OPR	\$ 20,000	NSERC

Investigator	Project	Title			Award		Amount	Agency
Dancik, B P	 		·	• • • • • • • • • • • • • • • • • • • •				
Editorial support :	services - To cover the d by Dr B Dancik as I	e cos Editor	t of editorial sup of the Canadia	pport services and incidental not some services and incidental	CTR	\$	40,000	NRC
Mating system ar	nd selection compone	nts of	conifers		OPR	\$	19,500	NSERC
ecophysiology								
· · · · · · · · · · · · · · · · · · ·	tion of conifer family	_	•		OPR	\$	60,000	NSERC
Hellum, A K	vith Dean (Agriculture vith Dean (Agriculture		• ,	ic variation and adaptation				
ecophysiology		and i	orestry). I ores	t sciences-lorest				
Higginbotham, K O	interactions in ladge	م مامد	sino coodlings		OBB	o r	11 707	AFDDT
	interactions in lodge rith Dean (Agriculture		_	t sciences-forest	OPR	\$	11,707	AFDRT
ecophysiology		una i	Greeny). Torce	i sciences forest				
Hiratsuka, Y	sith Assau M. A (Caiana	- Ch	aminto Dhata					
Holroyd, G L	ith Ayer, W A (Science	e, Un	iemistry): Pnyto	chemical investigation of				
	rith Butler, J R: Habita	ıt sele	ection and ployg	yny				
	ntroduction of the Trui	npete	r Swan to Elk Is	sland	OPR	\$	10,000	WWFC
Lieffers, V J	enruce and tamarack	ollow	ina drainago: +	ee age and depth of water table	OPR	\$	18,972	AFDRT
	e in water table height		-	· ·	OPR	\$ \$	15,000	NSERC
Murphy, P J	•	5.77	Janana Diaon O	piass and ramaidon	5, 11	Ψ	10,000	1402110
Alberta woodlot s	•				CTR	\$	5,000	CFS
	ity in selected fuel typ and northwest territor		r hand crews ar	d motorized equipment in the	CTR	\$	26,600	CFS
			story): History o	forest protection in				
Rothwell, R L	·		•	•		_		
	trategy - Job Develop		-	t anionana forant	CTR	\$	255,897	EIC
ecophysiology	rith Dean (Agriculture	and r	rorestry): Fores	i sciences-iorest				
Wein, R W								
	budgets and plant su				OPR	\$	9,428	NSERC
Co-investigator w ecophysiology	rith Dean (Agriculture	and F	orestry): Forest	t sciences-forest				
Woodard, P M	•							
_	rith Murphy, P J: Firel	-	-					
	orn sheep and veget	ation 1	to prescribed bu	ırning on Ram Mountain, Alberta	CTR	\$	3,500	RPWF
Yeh, F C Genetic structure	of forest trees				OPR	\$	28,000	NSERC
		and F	orestry): Genet	ic variation and adaptation	•	*	_0,000	
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	11	\$	448,997	NSERC	6	\$	151,928	
Operating	11	\$	202,357	Other Provincial	10	\$	160,179	
Total	22	\$	651,354	Other Federal Other Agencies	5 1	\$ \$	329,247 10,000	
				Total	22	\$	651,354	
	nt Sajanaa							
Department of Plai	iii Science						Amount	Aganay
Department of Plai	Project	Title			Award		Amount	Agency
Investigator Bailey, A W	Project							-
Investigator Bailey, A W Effect of grazing of the street of grazing of g	Project on plains rough fescu	e	ion from rough	fescue rangeland in central	OPR OPR	\$ \$	10,000 52,000	AGCA ARCA
Investigator Bailey, A W Effect of grazing of Alberta	Project on plains rough fescu on forage and beef programme for the second secon	e oduct		fescue rangeland in central	OPR		10,000	AGCA
Investigator Bailey, A W Effect of grazing of Alberta The impacts of grazing of Briggs, K G	Project on plains rough fescu on forage and beef pr razing on the rangelar	e oduct			OPR OPR	\$	10,000 52,000 40,500	AGCA ARCA NOVA
Investigator Bailey, A W Effect of grazing of Alberta The impacts of gr Briggs, K G Growth of Brassic	Project on plains rough fescu on forage and beef pr razing on the rangelar ca campestris field tes	e oduct nd eco	osystem - Thesi	s support for Anne Naeth	OPR OPR OPR	\$ \$	10,000 52,000 40,500 9,000	AGCA ARCA NOVA BONIS
Investigator Bailey, A W Effect of grazing of Alberta The impacts of gr Briggs, K G Growth of Brassic Plant-soil interact	Project on plains rough fescu on forage and beef pr razing on the rangelar	e oduct nd eco st de Pra	osystem - Thesi airie, July 2-24,	s support for Anne Naeth	OPR OPR	\$	10,000 52,000 40,500	AGCA ARCA NOVA

	Project 1	Title			Award		Amount	Agency
liruki, C								
Fungus transmission of organisms	f plant viruses	2) Pla	ant diseases as	sociated with Mollicutes	OPR	\$	38,400	NSERC
Characterization of the ag	jent causing v	/heat	spot mosaic dis	ease in Alberta	OPR	\$	31,000	WGRF
orak, A Co-investigator with John	son-Flanagan	, A: H	igh pressure liq	uid chromatography,				
ohnson-Flanagan, A High pressure liquid chror	matography s	winair	na bucket rotor		EQP	\$	12,038	NSERC
ing, J R		_					ŕ	
Fall regrowth potential of	•	_	-		OPR	\$	12,000	AART
Germination and establish nowles, N R	nment of past	ure gr	ass species		OPR	\$	22,000	ARCA
Increasing tuber yield and seed-tubers	l earliness by	manip	oulating the phy	siological age of potato	OPR	\$	65,462	ARCA
Co-investigator with Tewa								
Mechanisms of ageing in	meristematic	and tu	ber tissues of p	potato	OPR	\$	14,772	NSERC
pencer, M E Field trials of methods to i soils	induce synchr	onous	s germination o	f dormant weed seeds in Alberta	OPR	\$	36,735	ARCA
Ethylene and plants					OPR	\$	70,862	NSERC
Co-investigator with John	son-Flanagan	, A: H	igh pressure lic	uid chromatography,				
ewari, J P Colonization of barley in A	Alberta by the	"hiolo	gical fertilizers"		OPR	\$	10,472	AART
The mechanism of necros					OPR	\$	10,000	AGCA
	between the	Univer	sity of Alberta	and the Alberta Special Crops ort - Ms. Regina Pluim	OPR	\$	9,000	ASCHR
Co-investigator with Ayer	, W A (Scienc	e, Cho	emistry): Invest	gation of American Leaf				
Host-parasite interaction brassicae	in the blacksp	ot dise	ease of rapesee	ed caused by Alternaria	OPR	\$	15,000	NSERC
oop, E W Bedding plant trials, contr anden Born, W H	ibutions for ye	ear 19	87/88 ranged fi	rom \$50.00 to \$1,000.00	OPR	\$	1,960	MISC
Uptake and mode action					OPR	\$	13,730	AART
Brassica campestris and					OPR	\$	9,000	BONIS
Uptake and mode action			ean)		OPR	\$	10,000	DUP
Behavior and fate of syste	emic herbicide	∍s			OPR	\$	20,301	NSERC
Herbicide field program					OPR	\$	750	SANDO
		additi	Ves		OPR	\$	24,300	WGRF
Enhancement of herbicide	e uptake with	addill	•00				•	***
/alton, P D	·			vis and tissue culture	OPR	\$		
	enetic variatio	n indu	uced by Pan-mi	xis and tissue culture	OPR OPR	\$ \$	10,000 10,000	AGCA
/alton, P D A comparative study of ge	enetic variatio	n indu	uced by Pan-mi	xis and tissue culture Source of Funds			10,000	AGCA
/alton, P D A comparative study of go The genetics of embryogo	enetic variatio enesis in Med	n indu licago	uced by Pan-mi sativa		OPR	\$ 	10,000 10,000	AGCA
Alton, P D A comparative study of go The genetics of embryogo Type of Award Conferences Equipment	enetic variatio enesis in Med No.	in indulicago	aced by Pan-mi sativa Amount 2,645 12,038	Source of Funds NSERC Other Provincial	OPR <i>No.</i> 8 7	\$ 	10,000 10,000 <i>Amount</i> 184,018 212,399	
Acomparative study of go The genetics of embryogo Type of Award Conferences Equipment Operating	enetic variatio enesis in Med No. 1 1 25	in indulicago	Amount 2,645 12,038 547,244	Source of Funds NSERC Other Provincial Other Federal	OPR <i>No.</i> 8 7 3	\$ \$ \$	10,000 10,000 <i>Amount</i> 184,018 212,399 30,000	AGCA
/alton, P D A comparative study of go The genetics of embryogo Type of Award Conferences Equipment	enetic variatio enesis in Med No.	in indulicago	aced by Pan-mi sativa Amount 2,645 12,038	Source of Funds NSERC Other Provincial	OPR <i>No.</i> 8 7	\$ 	10,000 10,000 Amount 184,018 212,399 30,000 135,510	AGCA
Valton, P D A comparative study of go The genetics of embryogo Type of Award Conferences Equipment Operating	enetic variatio enesis in Med No. 1 1 25 27	in indulicago	Amount 2,645 12,038 547,244	Source of Funds NSERC Other Provincial Other Federal Other Agencies	OPR No. 8 7 3 9	\$ \$ \$ \$	10,000 10,000 <i>Amount</i> 184,018 212,399 30,000	AGCA
Alton, P D A comparative study of get The genetics of embryoget Type of Award Conferences Equipment Operating Total Department of Rural Eco	enetic variatio enesis in Med No. 1 1 25 27	n indulicago	Amount 2,645 12,038 547,244	Source of Funds NSERC Other Provincial Other Federal Other Agencies	OPR No. 8 7 3 9	\$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510	AGCA
Alton, P D A comparative study of go The genetics of embryogo Type of Award Conferences Equipment Operating Total Department of Rural Economics Investigator Inmadi-Esfahani, F	enetic variation enesis in Medical No. 1 1 25 27 27 27 27 27 27 27 27 27 27 27 27 27	s indulicago	Amount 2,645 12,038 547,244 561,927	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	OPR No. 8 7 3 9 27	\$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927	AGCA NSERC
Acomparative study of get The genetics of embryoget Type of Award Conferences Equipment Operating Total Department of Rural Economics Equipment Operating Total Department of Rural Economics Equipment Operating Total Department of Rural Economics Espansis For Economics Espansis For Economics Espansis For Economics For E	enetic variation enesis in Medicenesis in Medicenes	s indulicago \$ \$ \$ \$ Title	Amount 2,645 12,038 547,244 561,927	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 8 7 3 9 27	\$ \$ \$ \$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927	AGCA NSERC
Acomparative study of geta The genetics of embryogeta Type of Award Conferences Equipment Operating Total Department of Rural Economics States Total De	enetic variation enesis in Medicenesis in Medicenes	s indulicago \$ \$ \$ \$ Title	Amount 2,645 12,038 547,244 561,927	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	OPR No. 8 7 3 9 27 Award	\$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927	AGCA NSERC Agency
Acomparative study of get The genetics of embryoget Type of Award Conferences Equipment Operating Total Department of Rural Economics States of Expension of Ex	enetic variation enesis in Medical No. 1 1 25 27 Donomy Project daile, L P: Structure Alberta grain ta collection	\$ \$ \$ \$ Title	Amount 2,645 12,038 547,244 561,927	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 8 7 3 9 27	\$ \$ \$ \$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927	AGCA NSERC
Acomparative study of get The genetics of embryoget Type of Award Conferences Equipment Operating Total Department of Rural Economics Sequipment Operating Total Department Ope	enetic variation enesis in Medical No. 1 1 25 27 Donomy Project daile, L P: Structure Alberta grain is a collection ips, W E: Return in Medical enesis in	\$ \$ \$ Title uctura	Amount 2,645 12,038 547,244 561,927 I projections for action to year 20 o farmland investors	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	OPR No. 8 7 3 9 27 Award	\$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927 Amount	AGCA NSERC Agency
Acomparative study of get The genetics of embryoget Type of Award Conferences Equipment Operating Total Department of Rural Economics Structural projections for Structural projectio	enetic variation enesis in Medical No. 1 1 25 27 Donomy Project daile, L.P. Structural Structural Grain in Structural Grain	s s s s s s s s s s s s s s s s s s s	Amount 2,645 12,038 547,244 561,927 I projections for action to year 20 of farmland invention of risks and	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	OPR No. 8 7 3 9 27 Award	\$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927 Amount	AGCA NSERC Agency
A comparative study of get The genetics of embryoget Type of Award Conferences Equipment Operating Total Department of Rural Economics Structural projections for Sauer, L Grain and cattle farm dat Co-investigator with Mum	enetic variationenesis in Medical No. 1 1 25 27 Donomy Project daile, L P: Structure Structure Graines, W E: Return Reprovement issues a provement issues and the structure of the structure	s s s s s s s s s s s s s s s s s s s	Amount 2,645 12,038 547,244 561,927 I projections for action to year 20 of farmland invention of risks and neconomic rep	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total Alberta or Alberta d returns lacement strategies for dairy	OPR No. 8 7 3 9 27 Award OPR CTR	\$ \$ \$ \$ \$ \$ \$ \$ \$	10,000 10,000 Amount 184,018 212,399 30,000 135,510 561,927 Amount 28,000 4,800	AGCA NSERC Agency ARCA AGCA

Constantino The o General Repor		Project Ti	tle			Award		Amount	Agency
Constantino The o General Repor									
The o Gener Repor	estigator with Wolfe	e, F H (Food So	ience	e): Evaluation	of the differential				
Gener Repor	, L F pportunities for woo	dlate in Albarta	form	^		OPR	\$	3,675	AART
Repor	•				rence to the forest sector	OPR	э \$	3,675 17,920	AFDRT
				-	odgepole pine and jack pine	CTR	э \$	1,524	CFS
				-	n American timber assessment	CTR	э \$	21,300	CFS
	et model	opinent and eve	aluali	on or the North	Amencan timber assessment	OIR	Φ	21,300	CF3
Hawkins, M	Н								
•	t of freer trade with				•	OPR	\$	10,000	AART
	t of freer trade with				ry	OPR	\$	14,000	AEFMB
	elivery of extension	services to Alb	erta h	nog producers		OPR	\$	12,150	APPM
.erohl, M L .Co-in	vestigator with Hawk	cine M.H.Imna	ct of	freer trade wit	h the				
	livestock industry	ans, with impa	Ol OI	ireer trade wit	n the	CTR	\$	30,000	ADA
	estigator with Baue	r I · An econor	nic ev	valuation of till	age	0111	Ψ	30,000	ADA
lumey, G A	oongato Dago	., 2. / / 000/10/	,,,,		ugo				
An es	timation of risks and	I returns from c	roppii	ng alternatives	8	OPR	\$	17,000	ARCA
Murri, D G	rootigator with Have	ino M.U. The	-، الما	unu of outome!-	n nominos				
اادهان Phillips, W E	vestigator with Hawk	uns, ivi m: The (uelive	iy oi extensio	n services				
	vestigator with Cons	tantino, L F: Ge	enera	l equilibrium n	nodel of the				
	rading analysis	,		•		OPR	\$	3,672	APPM
	ns to farmland inves	tment in Albert	а			OPR	\$	17,000	ARCA
Co-inv	estigator with Cons	stantino, L F: Co	ontinu	ation of the d	evelopment		·	,	
'eeman, M N	A				•				
	economic influence		-			OPR	\$	22,000	ARCA
Marke eeman, T S '	et share competition	in world wheat	mark	ets		OPR	\$	27,000	ARCA
•	vestigator with Veen	nan M.M. Mark	et sh	are competitio	n in world				
	estigator with Veen			· · · · · · · · · · · · · · · · · · ·					
	-				ons in prairie grain production	OPR	\$	38,000	ARCA
	roductivity	., .,			one in prame gram production	0, ,,	Ψ	30,000	, , .
Туре	of Award	No.		Amount	Source of Funds	No.		Amount	
Contra	acts	5	\$	65,484	Other Provincial	13	\$	282,955	
Opera			\$	274,917	Other Federal	3	\$	27,624	
Total	J		\$	340,401	Other Agencies	3	\$	29,822	
					Total	19	\$	340,401	
_									
•	nt of Soil Scien					4			
nvestigator		Project Ti	tie			Award		Amount	Agency
hanasyk, D		ra Milan +=	m :-#	luones et alli : :	••				
Co-In	vestigator with Nybo	-		-	Je,	000	•	45.000	ADO 4
	s of crop manageme	•		ration		OPR	\$	15,000	ARCA
Effect	rs affecting infiltratio		S			OPR	\$	15,000	NSERC
Effect Facto	ale reclaimed land s	son tiltn project				CTR	\$	30,589	TAUC
Effect Facto Highv	zer and soil quality					OPR	\$	5,000	AART
Effect Facto Highv Dudas, M J	zation of trace elem		red fly	/ ash		CTR	\$	57,375	ETHUR
Effect Facto Highv Dudas, M J Fertili:	zalivii vi liale eleili	ents in weathe					¥	0.,0,0	
Effect Facto Highv Dudas, M J Fertili: Mobili			ems .	and 2) Deorar	dation and authidenic formation		\$	24 417	
Effect Facto Highy Dudas, M J Fertili: Mobili 1) Dyı			ems,	and 2) Degrad	dation and authigenic formation	OPR	\$	24,417	NSERC
Effect Facto Highv Dudas, M J Fertili: Mobili 1) Dyr of soil	namics of heavy me minerals	tals in soil syste			dation and authigenic formation chromatography		\$	24,417	
Effect Facto Highv Dudas, M J Fertiliz Mobili 1) Dyr of soil Co-inv	namics of heavy me minerals vestigator with Pawl	tals in soil syst uk, S: High per	forma	ınce ion/liquid	_		\$	24,417	
Effect Facto Highv Dudas, M J Fertili: Mobili 1) Dyi of soil Co-inv	namics of heavy me minerals vestigator with Pawl	tals in soil syst uk, S: High per	forma	ınce ion/liquid	chromatography		\$	24,417 5,000	
Effect Facto Highv Dudas, M J Fertili: Mobili 1) Dyr of soil Co-inv Fertili:	namics of heavy me minerals vestigator with Pawl vestigator with Juma zer and soil quality	tals in soil syst uk, S: High per	forma	ınce ion/liquid	chromatography	OPR	\$	5,000	NSERC
Effect Facto Highv Dudas, M J Fertili: Mobili 1) Dyr of soil Co-inv Co-inv Fertili: Fertili:	namics of heavy me minerals vestigator with Pawl vestigator with Juma zer and soil quality zer and soil quality	tals in soil systouk, S: High per a, N G: Develop	forma oment	nce ion/liquid of new mana	chromatography gement systems	OPR OPR	•		NSERC
Effect Facto Highv Dudas, M J Fertili: Mobili 1) Dyr of soil Co-inv Co-inv Fertili: Fertili:	namics of heavy me minerals vestigator with Pawl vestigator with Juma zer and soil quality	tals in soil systouk, S: High per a, N G: Develop	forma oment	nce ion/liquid of new mana	chromatography gement systems	OPR OPR	\$	5,000	NSERC

Investigator		Project 1	Title_			Award		Amount	Agency
McGill, W B									
	Assurance Program					CTR	\$	10,000	ADA
To comp			rmat,	compatible with	the New Arc/Info software, data	CTR	\$	6,325	AGCA
On site	biotechnologies for s	oil conserv	ation	and risk manad	gement on luvisolic soils	OPR	\$	65,000	ARCA
	of soil C and N dyna			`	•	OPR	\$	17,480	NSERC
Co-inve	stigator with Dean (A		and F	orestry): Forest	sciences-forest				
Co-inve	stigator with Pawluk,	S: High pe	erform	nance ion/liquid	chromatography				
Compos	sting crop residues fo	r soil cons	ervati	on and nutrient	supply	OPR	\$	25,000	WGRF
Nyborg, M									
					, incorporation, and banding	OPR	\$	7,000	AART
-	_			-	aracteristics and crop yield	OPR	\$	51,000	ARCA
	n of N gases from fro			-		OPR	\$	10,000	NSERC
Mingchu	1)		_	-	Graduate Student: Zhang	OPR	\$	9,921	PPI
	ole the soils and plar Il Plant - Pincher Cre		mine	the extent and	effects of sulphur emissions from	OPR	\$	4,500	SHELL
A study	of fall-applied nitroge	en: Time of	soil t	est for nitrogen	, incorporation, and banding	OPR	\$	7,000	WCOF
Co-inve	stigator with McGill, \	W B: Comp	ostin	g crop residues	for soil				
Pawluk, S		–							
	stigator with Dudas,								
	stigator with Juma, N		•		gement systems		_		
	rformance ion/liquid	_				EQP	\$	38,900	NSERC
•	gical influences upor		-			OPR	\$	45,871	NSERC
	stigator with Dudas,								
Co-inve	stigator with McGill, \	W B: Comp	ostin	g crop residues	for soil				
Pluth, D J	Divor forant drainaga	project				CTR	\$	19,000	AFLW
	River forest drainage		~~d C	araatmi), Earaa	anionese ferest	CIR	φ	19,000	AI LVV
	stigator with Dean (A siology	igniculture a	and r	orestry): Fores	sciences-torest				
Robertson, J A									
	I effects of previous	y applied F	fertil	izer on tilled an	d untilled soils	OPR	\$	10,000	AART
Co-inve urea		K W (Agrid	cultur	al Engineering)	: Metering and placement of				
Residua	al effects of previousl	y applied F	fertil	izer on tilled an	d untilled soils	OPR	\$	4,000	СОМ
	e, a possible deficien					OPR	\$	4,000	PPI
Residua	al effects of previousl	v applied F	o fertil	lizer on tilled an	d untilled soils	OPR	\$	6,000	WCOF
Tewari, J P									
Co-inve	stigator with Roberts	on, J A: Re	esidua	al effects of pre	viously				
Type o	f Award	No.		Amount	Source of Funds	No.		Amount	
Contrac		5	\$	123,289	NSERC	7	\$	291,668	
Equipm		1	\$	38,900	Other Provincial	8	\$	182,000	
Operatii Total	ng	21 27	\$ \$	476,189 638,378	Other Federal Other Agencies	1 11	\$ \$	6,325 158,385	
iotai		41	Ψ	000,070	Total	27	\$	638,378	

Faculty of Arts

Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences Contracts Operating Research Prizes	8 12 40 1	\$ \$ \$ \$	40,250 85,508 645,906 60,615	NSERC SSHRC Other Provincial Other Federal	10 35 2 3	\$ \$ \$ \$	143,375 452,781 10,800 91,615	
Total	61	\$	832,279	Other Agencies Total	11 61	\$ \$	133,708 832,279	
Department of Anthropo	logy Project	Titla			Award		Amount	Agency
nvestigator Asquith, P J	riojeci	i ilie						
Canada Research Fellow Fedigan, L M	•				OPR	\$	4,000	SSHRC
Life histories, demograph Fisher, A D	y, and reprod	uction	in polygamous	primates	OPR	\$	30,000	NSERC
Young Blood Indians in re Freeman, M M	etrospect				OPR	\$	16,368	SSHRC
Tradition, community, and	d common pro	perty	resource mana	gement	OPR	\$	17,666	SSHRC
Alberta	y/stratigraphy	of Ala	ska-Yukon teph	ras and paleoecology of central	OPR	\$	8,000	NSERC
Villoughby, P R Canada research fellowsl	hip - Prehistor	ic ada	ptations at Sing	jida, Tanzania	OPR	\$	4,000	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	6	\$	80,034	NSERC	2	\$ \$	38,000 42,034	
				SSHRC Total	4 6	\$	80,034	
Department of Classics	Project	Title						Agency
nvestigator Fishwick, D	Project		witimo Alpo		6 Award	\$	Amount	
nvestigator Fishwick, D The Imperial Cult in Rom Fracchia, H M	an Gaul and t	he M a	•		Award OPR	\$	80,034 Amount 8,618	SSHRC
nvestigator Fishwick, D The Imperial Cult in Rom Fracchia, H M Mingardo Valley (Westers Gualtieri, M	an Gaul and t	he M a	•		Award OPR OPR	\$ \$ \$	80,034 Amount 8,618 5,301	SSHRC SSHRC
rishwick, D The Imperial Cult in Rom Fracchia, H M Mingardo Valley (Westers Gualtieri, M Excavations at Roccaglos	an Gaul and t	he M a	•		Award OPR	\$	80,034 Amount 8,618	SSHRC
nvestigator Fishwick, D The Imperial Cult in Rom Fracchia, H M Mingardo Valley (Westers Gualtieri, M	an Gaul and t n Lucania) sui riosa	he Ma	roject	Total	Award OPR OPR	\$ \$ \$	80,034 Amount 8,618 5,301	SSHRC SSHRC
rivestigator Fishwick, D The Imperial Cult in Rome Fracchia, H M Mingardo Valley (Westers Gualtieri, M Excavations at Roccaglos	an Gaul and t n Lucania) sui riosa	he Ma	roject	Total	Award OPR OPR	\$ \$ \$	80,034 Amount 8,618 5,301 14,000	SSHRC SSHRC SSHRC
rishwick, D The Imperial Cult in Romeracchia, H M Mingardo Valley (Westers Gualtieri, M Excavations at Roccaglos Small, A M Classical Association of te	an Gaul and to the control of the co	he Ma	roject Eleventh Annua	Total	Award OPR OPR OPR CFC	\$ \$ \$	80,034 Amount 8,618 5,301 14,000 4,500	SSHRC SSHRC SSHRC
Tishwick, D The Imperial Cult in Romeracchia, H M Mingardo Valley (Western Excavations at Roccaglor Small, A M Classical Association of the Type of Award Conferences Operating	an Gaul and ton Lucania) surriosa the Canadian No. 1 3 4	he Marvey p West:	Eleventh Annua Amount 4,500 27,919	I Meeting Source of Funds	Award OPR OPR OPR CFC No.	\$ \$ \$ \$	80,034 Amount 8,618 5,301 14,000 4,500 Amount	SSHRC SSHRC SSHRC
Tishwick, D The Imperial Cult in Romeracchia, H M Mingardo Valley (Western Excavations at Roccaglor Small, A M Classical Association of to Type of Award Conferences Operating Total Department of Compara	an Gaul and ton Lucania) surriosa the Canadian No. 1 3 4	he Marvey p West:	Eleventh Annua Amount 4,500 27,919	I Meeting Source of Funds	Award OPR OPR OPR CFC No.	\$ \$ \$ \$	80,034 Amount 8,618 5,301 14,000 4,500 Amount	SSHRC SSHRC SSHRC
Tishwick, D The Imperial Cult in Romeracchia, H M Mingardo Valley (Western Excavations at Roccaglor Small, A M Classical Association of to Type of Award Conferences Operating Total Department of Compara Investigator Blodgett, E D Toward a history of the limited in Romeracchia content of the Imperior Conferences Investigator	an Gaul and to n Lucania) surriosa the Canadian No. 1 3 4	he Marvey p West: \$ \$ \$ ture Title	Eleventh Annua Amount 4,500 27,919 32,419 Canada: Confer	I Meeting Source of Funds	Award OPR OPR CFC No.	\$ \$ \$ \$	80,034 Amount 8,618 5,301 14,000 4,500 Amount 32,419	SSHRC SSHRC SSHRC SSHRC
Tishwick, D The Imperial Cult in Romeracchia, H M Mingardo Valley (Western Gualtieri, M Excavations at Roccaglor Small, A M Classical Association of t Type of Award Conferences Operating Total Department of Comparativestigator Blodgett, E D Toward a history of the limanifestos, University of	an Gaul and to n Lucania) surriosa the Canadian No. 1 3 4 tive Literate Project terary institution Alberta, Noverary institution terary institution and the care institut	he Marvey p West: \$ \$ \$ ture 7/11/2-14. 00 in (Eleventh Annua Amount 4,500 27,919 32,419 Canada: Confer /87 Canada: Confer	Total Il Meeting Source of Funds SSHRC ence III: Prefaces and literary ence II: Questions of funding	Award OPR OPR CFC No. 4	\$ \$ \$ \$	80,034 Amount 8,618 5,301 14,000 4,500 Amount 32,419	SSHRC SSHRC SSHRC

Investigator	i cs Project Title			Award		Amount	Agency
Boothe, P M							
Canadian Macroeconom 1/87	nic Study Group Co	onference, to be I	neld in Edmonton, Oct 30-Nov	CFC	\$	2,750	SSHRC
Financial market - macro	o linkages in Canad	da		OPR	\$	9,846	SSHRC
oyte, P C Two-part pricing in spac	e			OPR	\$	17,848	SSHRC
indsey, C R		origina in onogo					
Co-investigator with Coy vernois, J	ne, P.C. Two-part	oncing in space.	• •				
Co-investigator with Sca ercy, M B	rfe, B L: Determina	ants of exploratio	n and				
Co-investigator with Cor		culture and Fores	stry, Rural Economy): General				
equilibrium model of the Co-investigator with Cor		culture and Fores	strv. Rural Economy):				
Continuation of the deve							
yan, D L Co-investigator with Sca	urfe, B L: Determina	ants of exploratio	n and				
carfe, B L Determinants of explora	tion and developm	ent of activity leve	els	OPR	\$	6,000	EMRC
ostak, R W	,	•			•		
Ine role of transportation England and France	n in the Industrial F	Revolution: A con	nparison of eighteenth century	OPR	\$	7,820	SSHRC
on Hohenbalken, B	eta D.C. Two parti	origina in engag					
Co-investigator with Coy 'est, D S							
Competition among plan	ned shopping cent	tres: An econome	etric-spatial analysis	OPR	\$	7,103	SSHRC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	2,750	SSHRC Other Federal	5	\$	45,367	
	1 \$ 5 \$ 6 \$	2,750 48,617 51,367	SSHRC Other Federal Total		\$ \$	45,367 6,000 51,367	
Conferences Operating	5 \$	48,617	Other Federal	5 1	\$	6,000	
Conferences Operating Total	5 \$	48,617	Other Federal	5 1	\$	6,000	
Conferences Operating Total Department of English	5 \$	48,617 51,367	Other Federal	5 1	\$	6,000	Agency
Conferences Operating Total Pepartment of English Evestigator ishop, E	5 \$ 6 \$	48,617 51,367	Other Federal Total	5 1 6	\$ \$	6,000 51,367 <i>Amount</i>	
Conferences Operating Total Pepartment of English Evestigator Ishop, E The Creating Word 1987 Trant, R J S	5 \$ 6 \$ Project Title 7:The Learning and	48,617 51,367 d Teaching of En	Other Federal Total glish	5 1 6 Award	\$ \$	6,000 51,367 <i>Amount</i> 5,500	SSHRC
Conferences Operating Total Pepartment of English Evestigator Sishop, E The Creating Word 1983 Tant, RJS The B text of the old Eng	5 \$ 6 \$ Project Title 7:The Learning and	48,617 51,367 d Teaching of En	Other Federal Total glish	5 1 6	\$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022	SSHRC
Conferences Operating Total Pepartment of English Exestigator ishop, E The Creating Word 1987 rant, R J S The B text of the old English elly, G D Walter Scott and His Infl	5 \$ 6 \$ Project Title 7:The Learning and glish Bede: A lingu	48,617 51,367 Teaching of Engistic commentary	Other Federal Total glish	5 1 6 Award	\$ \$	6,000 51,367 <i>Amount</i> 5,500	SSHRO
Conferences Operating Total Department of English Envestigator Shop, E The Creating Word 1987 The B text of the old English Elly, G D Walter Scott and His Infill CMaster, J Body and character in the	5 \$ 6 \$ Project Title 7:The Learning and glish Bede: A lingulation between the conference of the conf	48,617 51,367 Teaching of Engistic commentary, to be held in Ec	Other Federal Total glish	5 1 6 Award CFC OPR	\$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022	
Conferences Operating Total Department of English Evestigator ishop, E The Creating Word 1983 rant, R J S The B text of the old English elly, G D Walter Scott and His Infile IcMaster, J Body and character in the	5 \$ 6 \$ Project Title 7:The Learning and glish Bede: A lingulation between the eighteenth-centure of the second s	48,617 51,367 d Teaching of Engistic commentary , to be held in Ecury novel	Other Federal Total glish Imonton, Aug 26-29/87	5 1 6 Award CFC OPR CFC	\$ \$ \$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022 4,000	SSHRC SSHRC SSHRC
Conferences Operating Total repartment of English Exestigator ishop, E The Creating Word 1987 rant, R J S The B text of the old Engelly, G D Walter Scott and His Inflection CMaster, J Body and character in the euman, S C Co-investigator with Blockiterary	5 \$ 6 \$ Project Title 7:The Learning and glish Bede: A lingulation between the eighteenth-centure of the second s	48,617 51,367 d Teaching of Engistic commentary , to be held in Ecury novel	Other Federal Total glish Imonton, Aug 26-29/87	5 1 6 Award CFC OPR CFC	\$ \$ \$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022 4,000	SSHRC SSHRC SSHRC
Conferences Operating Total repartment of English Exestigator ishop, E The Creating Word 1987 rant, R J S The B text of the old Engelly, G D Walter Scott and His Infl cMaster, J Body and character in the euman, S C Co-investigator with Blockiterary rrell. J O	5 \$ 6 \$ Project Title 7:The Learning and glish Bede: A lingulation of the project in the projec	48,617 51,367 d Teaching of Engistic commentary , to be held in Ecury novel rative Literature)	Other Federal Total glish monton, Aug 26-29/87 Toward a history of the	5 1 6 Award CFC OPR CFC	\$ \$ \$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022 4,000 60,615	SSHRC SSHRC SSHRC
Conferences Operating Total Department of English Evestigator Sishop, E The Creating Word 1987 Frant, R J S The B text of the old English Evelly, G D Walter Scott and His Infl Event Section of Section 1987 Walter Scott and His Infl Event Section of Section 1987 The interior design of Section 1987 Wilson, R R	Project Title 7:The Learning and glish Bede: A lingu luence Conference ne eighteenth-centu dgett, E D (Compa	48,617 51,367 d Teaching of Englistic commentary to be held in Eccury novel rative Literature)	Other Federal Total glish monton, Aug 26-29/87 Toward a history of the s Cockpit Theatres	5 1 6 6 Award CFC OPR CFC PRZ	\$ \$ \$ \$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022 4,000 60,615	SSHRC SSHRC CC
Conferences Operating Total Department of English Envestigator Sishop, E The Creating Word 1987 Frant, R J S The B text of the old English Walter Scott and His Infl IcMaster, J Body and character in the Icuman, S C Co-investigator with Block literary Direll, J O The interior design of Silvison, R R	Project Title 7:The Learning and glish Bede: A lingu luence Conference ne eighteenth-centu dgett, E D (Compa	48,617 51,367 d Teaching of Englistic commentary to be held in Eccury novel rative Literature)	Other Federal Total glish monton, Aug 26-29/87 Toward a history of the	5 1 6 Award CFC OPR CFC PRZ	\$ \$ \$ \$ \$	6,000 51,367 <i>Amount</i> 5,500 7,022 4,000 60,615	SSHRC SSHRC CC
Conferences Operating Total Department of English Investigator Bishop, E The Creating Word 1987 Grant, R J S The B text of the old English Walter Scott and His Infl McMaster, J Body and character in the Infl McMaster, J Co-investigator with Block literary Drrell, J O The interior design of Si Wilson, R R	Project Title 7:The Learning and glish Bede: A lingu luence Conference ne eighteenth-centu dgett, E D (Compa	48,617 51,367 d Teaching of Englistic commentary to be held in Eccury novel rative Literature)	Other Federal Total glish Imonton, Aug 26-29/87 Toward a history of the s Cockpit Theatres y narrative: Canada and Australia Source of Funds	Award CFC OPR CFC PRZ OPR OPR OPR No.	\$ \$ \$ \$ \$ \$ \$ \$	6,000 51,367 Amount 5,500 7,022 4,000 60,615 3,510 7,268 Amount	SSHRC SSHRC SSHRC
Conferences Operating Total Department of English Envestigator Sishop, E The Creating Word 1987 Grant, R J S The B text of the old English McMaster, J Body and character in the Meman, S C Co-investigator with Blockiterary Direll, J O The interior design of Silvison, R R National traditions and in Type of Award Conferences	Project Title Project Title 7:The Learning and glish Bede: A lingulation and	48,617 51,367 d Teaching of Englistic commentary to be held in Ecury novel rative Literature) e and Inigo Jone s in contemporar Amount 9,500	Other Federal Total glish Imonton, Aug 26-29/87 Toward a history of the s Cockpit Theatres y narrative: Canada and Australia Source of Funds SSHRC	Award CFC OPR CFC PRZ OPR OPR No. 5	\$ \$ \$ \$ \$ \$ \$ \$ \$	6,000 51,367 Amount 5,500 7,022 4,000 60,615 3,510 7,268 Amount 27,300	SSHRC SSHRC CC
Conferences Operating Total Department of English Investigator Bishop, E The Creating Word 1987 Grant, R J S The B text of the old English McMaster, J Body and character in the Neuman, S C Co-investigator with Blockiterary Drrell, J O The interior design of Sil Wilson, R R National traditions and in	Project Title Project Title 7:The Learning and glish Bede: A lingulation and	48,617 51,367 If Teaching of Englistic commentary to be held in Ecury novel rative Literature) and Inigo Jone is in contemporar Amount	Other Federal Total glish Imonton, Aug 26-29/87 Toward a history of the s Cockpit Theatres y narrative: Canada and Australia Source of Funds	Award CFC OPR CFC PRZ OPR OPR OPR No.	\$ \$ \$ \$ \$ \$ \$ \$	6,000 51,367 Amount 5,500 7,022 4,000 60,615 3,510 7,268 Amount	SSHRC SSHRC CC

Amount 14,500 4,000 18,500

Source of Funds

SSHRC

No.

3

Amount

18,500

No.

2 \$ 1 \$ **3** \$

Type of Award

Conferences Operating Total

nvestigator	Project Tit	tle			Award		Amount	Agency
rokop, M	Froject III	iie			Awaru		Airiourit	Agency
				airie Council on the teaching of	CFC	\$	5,000	SSHRC
Conferences				SSHRC	1	\$	5,000	
Department of History								
nvestigator	Project Ti	tle			Award		Amount	Agency
rown, D H Canada Research Fello lacKinnon, S History of forest protect	·	e histo	ory of Canadia	an law to 1900	OPR CTR	\$ \$	4,000 9,258	SSHRC GNWT
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	·	 \$	9,258	SSHRC	1	\$	4,000	
Operating		φ \$	4,000	Other Agencies	1	э \$	9,258	
Total		\$	13,258	Total	2	\$	13,258	
Department of Linguis	tics							
nvestigator	Project Ti	tle			Award		Amount	Agency
Development of a spee Evaluation of speaker a Type of Award Contracts Operating Total Department of Music	nnd context norma No. 1 1			Source of Funds SSHRC Other Agencies Total	OPR No. 1 1 2	\$ \$ \$ \$	20,000 40,340 <i>Amount</i> 40,340 20,000 60,340	BNR SSHRC
nvestigator	Project Ti	tle			Award		Amount	Agency
	uscripts of the late	e ren	aissance and	early counter-reformation	OPR	\$	8,254	SSHRC
ewis, C Canadian Music Theor	y Conference, Ma	ır 18-	20/88, U of A,	Edmonton, Alta	CFC	\$	4,000	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences Operating Total	1	\$ \$ \$	4,000 8,254 12,254	SSHRC	2	\$	12,254	
Department of Politica	l Science							
nvestigator	Project Ti	itle		···· <u>·</u>	Award		Amount	Agency
Dacks, G The devolution of author and The Northwest Telestevenson, G		ernm	ent of Canada	a to the Governments of Yukon	OPR	\$	82,000	DCF
Canadian federalism ir	the age of John	A. Ma	acdonald	•	OPR	\$	7,325	SSHRC
upper, A	افلام ماد مسلام م	. ro≕.	odinada - Mak	lic Corporations and Public	OPR	\$	2,000	IRPP

	No.	Amount	Source of Funds	No.		Amount	
Operating	3 \$	91,325	SSHRC Other Agencies Total	1 2 3	\$ \$	7,325 84,000 91,325	
epartment of Psychological	ogy see also Fad	culty of Science					
estigator	Project Title	е		Award		Amount	Agency
sanz, G L Children's use of story s	chemata: second	gonoration rocoa	roh	OPR	\$	14,423	NSERO
banz, J Development of mental		generalion resea		OPR	\$	18,000	NSER
rnell, E H Spatial cognition and wa	ovfinding by obildro	n n		OPP	ф	10.000	NOCO
Characteristics of memo				OPR OPR	\$ \$	12,822 25,804	NSER(
wson, M R	rable picture-boor	13		OFR	Φ	23,604	SSHIN
Figural effects on motion on, P	•	processing		OPR	\$	12,000	NSER
Basic and complex proc	esses in reading			OPR	\$	14,423	NSER
edman, A Multiple resources in cel ai, J W	rebral specializatio	on, divided attenti	on and mental rotation	OPR	\$	16,027	NSER
Event-related brain pote Concordia University, M		of perceptual-mot	or function (Transfer from	OPR	\$	10,000	NSER
iken, D L Dreams and emotional of	distress			OPR	\$	27,190	SSHR
Co-investigator with Dob The development of a so Environmental influence	obs, A R (Science) chema and text pr	: A longitudinal stocessing		OPR OPR	\$ \$	7,680 45,877	
Co-investigator with Dob The development of a so Environmental influence ythe, W E	obs, A R (Science) chema and text propersion the aged pop	: A longitudinal si ocessing pulation in an insti	tudy of memory	OPR	\$	45,877	SSHRO
Co-investigator with Dob The development of a so Environmental influence	obs, A R (Science) chema and text propersion the aged pop	: A longitudinal si ocessing pulation in an insti	tudy of memory			,	SSHRO
Co-investigator with Dob The development of a so Environmental influence ythe, W E	obs, A R (Science) chema and text propersion the aged pop	: A longitudinal si ocessing pulation in an insti	tudy of memory	OPR	\$	45,877	SSHR
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fello	obs, A R (Science) chema and text pross on the aged poponwiship - Mental rep	: A longitudinal si ocessing oulation in an insti oresentations	tudy of memory tution Source of Funds NSERC	OPR OPR No. 8	\$ \$	45,877 4,000 <i>Amount</i> 105,375	SSHR
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellon Type of Award	obs, A R (Science) chema and text pross on the aged popwship - Mental rep	: A longitudinal stocessing pulation in an institution in an institutions Amount Amount	tudy of memory tution Source of Funds	OPR OPR <i>No.</i>	\$	45,877 4,000 <i>Amount</i>	NSERC SSHRC
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellor Type of Award Operating	obs, A R (Science) chema and text pro- es on the aged pop wship - Mental rep No. 12 \$: A longitudinal stocessing pulation in an institution in an institutions Amount Amount	tudy of memory tution Source of Funds NSERC SSHRC	OPR OPR No. 8 4	\$ \$ \$	45,877 4,000 <i>Amount</i> 105,375 102,871	SSHR
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellon Type of Award	obs, A R (Science) chema and text pro- es on the aged pop wship - Mental rep No. 12 \$: A longitudinal stocessing pulation in an institution in an institution in an institution in a content in a	tudy of memory tution Source of Funds NSERC SSHRC	OPR OPR No. 8 4	\$ \$ \$	45,877 4,000 <i>Amount</i> 105,375 102,871 208,246	SSHRO
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellor Type of Award Operating partment of Religious estigator ida, M	obs, A R (Science) chema and text proses on the aged pop wship - Mental rep No. 12 \$ s Studies Project Title	: A longitudinal stocessing pulation in an institution in an institutions Amount 208,246	tudy of memory tution Source of Funds NSERC SSHRC	OPR OPR <i>No.</i> 8 4 12	\$ \$ \$	45,877 4,000 <i>Amount</i> 105,375 102,871	SSHR
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellor Type of Award Operating partment of Religious estigator	obs, A R (Science) chema and text proses on the aged pop wship - Mental rep No. 12 \$ s Studies Project Title	: A longitudinal stocessing pulation in an institution in an institutions Amount 208,246	tudy of memory tution Source of Funds NSERC SSHRC	OPR OPR <i>No.</i> 8 4 12	\$ \$ \$	45,877 4,000 <i>Amount</i> 105,375 102,871 208,246	SSHR0 SSHR0
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellor Type of Award Operating partment of Religious estigator ida, M	obs, A R (Science) chema and text proses on the aged pop wship - Mental rep No. 12 \$ s Studies Project Title	: A longitudinal stocessing pulation in an institution in an institutions Amount 208,246	tudy of memory tution Source of Funds NSERC SSHRC	OPR OPR No. 8 4 12	\$ \$ \$ 5	45,877 4,000 Amount 105,375 102,871 208,246	SSHR0 SSHR0
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellor Type of Award Operating partment of Religious estigator ida, M Shamanism on Okinawa Operating	obs, A R (Science) chema and text pro- es on the aged pop wship - Mental rep No. 12 \$ s Studies Project Title a Islands, southern	: A longitudinal stocessing pulation in an institution in an institutions Amount 208,246	tution Source of Funds NSERC SSHRC Total	OPR OPR No. 8 4 12 Award OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	45,877 4,000 <i>Amount</i> 105,375 102,871 208,246 <i>Amount</i> 6,780	SSHR0 SSHR0
Co-investigator with Dob The development of a so Environmental influence ythe, W E Canada Research Fellor Type of Award Operating partment of Religious estigator ida, M Shamanism on Okinawa	obs, A R (Science) chema and text pro- es on the aged pop wship - Mental rep No. 12 \$ s Studies Project Title a Islands, southern	a: A longitudinal stocessing pulation in an institute of the state of	tution Source of Funds NSERC SSHRC Total	OPR OPR No. 8 4 12 Award OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	45,877 4,000 <i>Amount</i> 105,375 102,871 208,246 <i>Amount</i> 6,780	SSHRO

Purdy, A G

Co-investigator with Blodgett, E D (Comparative Literature): Toward a history of the literary . . .

Rochet, B

Co-investigator with Nearey, T M (Linguistics): Evaluation of speaker and context . . .

Department	of Sociol	ogy
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Investigator	Project	Title			Award		Amount	Agency
Hackler, J C								
University of Alberta's C	entre of Crimin	ologic	cal Research		CTR	\$	25,000	SGC
Hartnagel, T F					000	•	07.044	001100
	outh employme	ent, ui	nderemploymen	t and unemployment in three	OPR	\$	67,911	SSHRC
Canadian cities Kent, S A								
Sects and cults in Cana	da. 1970-1980:	A Re	esource mobiliza	ation perspective	OPR	\$	10,327	SSHRC
Krahn, H	,	, , , , ,		and possible and a		*	,	
1988 All Alberta study					CTR	\$	900	ACOC
1988 All Alberta study					CTR	\$	8,100	AECC
1988 Edmonton area st	udy				CTR	\$	2,000	AID
1988 All Alberta study	-				CTR	\$	2,700	AT
1988 Edmonton area st	udy				CTR	\$	2,750	EBH
1988 Edmonton area st	•				CTR	\$	7,700	EPD
1988 All Alberta study	•				CTR	\$	900	GLAS
1988 All Alberta study					CTR	\$	1,800	JHSA
1988 Edmonton area st	udv				CTR	\$	4.400	UWIN
Krotki, K	,					•	•	
Collaborative study with					OPR			SSHRC
Lapierre-Adamcyk of U	niv of Montreal	: Can	adian national f	ertility study - \$90,052				
Salamon, E D	A 1- 11 - 11 - 11 - 11 - 11 - 11 -		:- Fales 4	000 1005	OPR	ф	20.252	SSHRC
Sexual offences agains	t children and y	outns	in Edmonton i	980-1985	UPH	\$	30,353	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	10	\$	56,250	SSHRC	3	\$	108,591	
Operating	3	\$	108,591	Other Provincial	2	\$	10,800	
Total	13	\$	164,841	Other Federal	1	\$	25,000	
				Other Agencies	7 13	\$	20,450	
				Total	13	\$	164,841	

Faculty of Business

Type of Award	No.		Amount	Source of Funds	No.	Amount
Operating	6	\$	96,163	NSERC	1	\$ 3,979
Total	6	\$	96,163	SSHRC	4	\$ 69,584
		•	•	Other Federal	1	\$ 22,600
				Total	6	\$ 96,163

Department of Finance and Management Science

Investiga	tor Project Title	Award	Amount	Agency	
Talwar, F	p pobust estimation in multiplicative error-in-variable models with application to financial data	OPR	\$ 3,979	NSERC	
O	perating NSERC	1	\$ 3,979		

nvestigator	Project 7	Title			Award		Amount	Agency
hambers, E J		***************************************						
Co-investigator with Cull	en, D <mark>M</mark> (Orgar	nization	al Analysis): I	emale graduates of western				
Canadian								
uviere, J J Choice of bicycle trails in	the Chicago a	roa with	h enecial refe	rence to nested and/or	OPR			USFS
hierarchal choice proces	ses and joint c	ontinuo:	us discrete de	ependent responses - Principal	0111			00/0
Investigator Dr. Donald A	A. Anderson, U	niversity	y of Wyoming	\$58,080 (Dr. Louviere is				
co-investigator)		•						
schenthaler, G B				Canadian sidios industry	OPR	\$	20.150	SSHRC
Competitive strategy for	nulation and in	npiemer	ntation in the	Canadian airline industry	UPh	Ф	20,150	SSHILL
Operating				SSHRC	1	\$	20,150	
epartment of Organiza	tional Anal	ysis						
estigator/	Project 1	Title			Award		Amount	Agency
ıllen, D M								
Co-investigator with Hall				tion, Physical Education and				
Sport Studies): The statu						_		001:5
Female graduates of wes	stern Canadiar	n busine	ess schools		OPR	\$	4,150	SSHRO
ephart, R P The organizational basis	of industrial a	rcidente	s in Canada		OPR	\$	25,000	SSHRO
rne organizational basis	or industrial at	ا العامات	, iii Gallaud		Ji 11	Ψ	20,000	OO; ii to
Co-investigator with Hini	ngs, C R: Arch	etypes,	tracks and th	e dynamics				
nings, C R					0.00			
Planning, organization a					OPR	\$	22,600	FAS
Archetypes, tracks and t	he dynamics o	t stratec	gic change an	d stability	OPR	\$	20,284	SSHRO
Tuno of Award				Course of Funds	A./ -		Amount	
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	No. 4	\$	72,034	SSHRC	3	\$	49,434	
	···········	\$		SSHRC Other Federal	3 1	\$	49,434 22,600	
	···········	\$		SSHRC	3		49,434	
	···········	\$		SSHRC Other Federal	3 1	\$	49,434 22,600	
Operating	4	\$		SSHRC Other Federal	3 1	\$	49,434 22,600	
Operating	4	\$		SSHRC Other Federal	3 1	\$	49,434 22,600	
Operating	4		72,034 Amount	SSHRC Other Federal Total Source of Funds	3 1	\$	49,434 22,600 72,034 Amount	
Operating Type of Award Equipment	y No. 1	\$	72,034 Amount 21,308	SSHRC Other Federal Total Source of Funds AHFMR	3 1 4 <i>No.</i>	\$ \$	49,434 22,600 72,034 <i>Amount</i> 21,308	
Operating aculty of Dentistr Type of Award Equipment Operating	y No. 1 9	\$ \$	72,034 Amount 21,308 327,865	SSHRC Other Federal Total Source of Funds AHFMR MRC	No. 1 7	\$ \$	49,434 22,600 72,034 <i>Amount</i> 21,308 270,953	
Operating aculty of Dentistr Type of Award Equipment	y No. 1	\$	72,034 Amount 21,308	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies	No. 1 7 2	\$ \$	49,434 22,600 72,034 <i>Amount</i> 21,308 270,953 56,912	
Operating Faculty of Dentistr Type of Award Equipment Operating	y No. 1 9	\$ \$	72,034 Amount 21,308 327,865	SSHRC Other Federal Total Source of Funds AHFMR MRC	No. 1 7	\$ \$	49,434 22,600 72,034 <i>Amount</i> 21,308 270,953	
Operating Faculty of Dentistr Type of Award Equipment Operating Total	y No. 1 9	\$ \$	72,034 Amount 21,308 327,865	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies	No. 1 7 2	\$ \$	49,434 22,600 72,034 <i>Amount</i> 21,308 270,953 56,912	
Operating Type of Award Equipment Operating Total aculty of Dentistry	y No. 1 9	\$ \$ \$	72,034 Amount 21,308 327,865	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies	No. 1 7 2	\$ \$	49,434 22,600 72,034 <i>Amount</i> 21,308 270,953 56,912	Agency
Operating aculty of Dentistr Type of Award Equipment Operating Total aculty of Dentistry vestigator	No. 1 9 10	\$ \$ \$	72,034 Amount 21,308 327,865	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies	No. 1 7 2 10	\$ \$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173	Agency
Operating Type of Award Equipment Operating Total aculty of Dentistry vestigator ean General research grant	No. 1 9 10	\$ \$ \$	72,034 Amount 21,308 327,865 349,173	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies	No. 1 7 2 10	\$ \$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173	<i>Agenc</i>)
Type of Award Equipment Operating Total aculty of Dentistry vestigator ean General research grant	No. 1 9 10 Project to the Dean for	\$ \$ \$	72,034 Amount 21,308 327,865 349,173	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies Total	No. 1 7 2 10 Award OPR	\$ \$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173 Amount	MRC
Type of Award Equipment Operating Total aculty of Dentistry vestigator ean General research grant	No. 1 9 10 Project to the Dean for	\$ \$ T itle	72,034 Amount 21,308 327,865 349,173	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies Total rch in the Faculty of Dentistry	No. 1 7 2 10	\$ \$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173	<u></u>
Type of Award Equipment Operating Total aculty of Dentistry vestigator ean General research grant argreaves, J A Nutritional study on elde	No. 1 9 10 Project to the Dean for	\$ \$ T itle	72,034 Amount 21,308 327,865 349,173	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies Total rch in the Faculty of Dentistry	No. 1 7 2 10 Award OPR	\$ \$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173 Amount 15,000 25,000	MRC KIB
Type of Award Equipment Operating Total aculty of Dentistry vestigator ean General research grant argreaves, J A Nutritional study on elde Dental, dietary and nutri	No. 1 9 10 Project to the Dean for rly Edmontonia tional survey o	\$ \$ Title the sup ans f a grou	72,034 Amount 21,308 327,865 349,173 oport of resea	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies Total arch in the Faculty of Dentistry eople in Edmonton	No. 1 7 2 10 Award OPR OPR	\$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173 Amount 15,000 25,000 31,912 Amount	MRC KIB
Type of Award Equipment Operating Total faculty of Dentistry rotal faculty of Dentistry rotal General research grant argreaves, J A Nutritional study on elde Dental, dietary and nutri	No. 1 9 10 Project to the Dean for rly Edmontonia tional survey of	\$ \$ T itle	72,034 Amount 21,308 327,865 349,173 oport of resea	SSHRC Other Federal Total Source of Funds AHFMR MRC Other Agencies Total Total Total Total Total Total Total Total Total	No. No. 1 7 2 10 Award OPR OPR OPR No.	\$ \$	49,434 22,600 72,034 Amount 21,308 270,953 56,912 349,173 Amount 15,000 25,000 31,912	MRC KIB

nvestigator	Project	Title			Award		Amount	Agency
earson, C H Co-investigator with Scot	t P.G. Conne	ective	tissue hinchemie	trv				
cott, P G				иу				
Connective tissue bioche		ysiolo	ogy		EQP	\$	21,308	AHFMF
Proteoglycans of non-car Maintenance grant - amir	-	or to	chnologiet		OPR OPR	\$ \$	64,921 30,911	MRC MRC
Collagen-degrading prote	-		_		OPR	э \$	63,476	MRC
Type of Award	No.		Amount	Source of Funds	No.	·	Amount	
Equipment	1	\$	21,308	AHFMR	1	\$	21,308	
Operating Total	3 4	\$ \$	159,308	MRC Total	3	\$	159,308	
i Otai	4	Þ	180,616	Total	4	\$	180,616	
epartment of Restorati	ve Dentist	rv						
vestigator	Project	•			Award		Amount	Agency
olland, G R	noneo to dom	200			OPP	ď	E0 040	MDC
Oral nerves and their res	ponse to dam	age			OPR	\$	58,310	MRC
Operating				MRC	1	\$	58,310	
epartment of Stomatol								
vestigator	Project	Title			Award		Amount	Agency
ggert, F M Application of immunoche	amietry to the	diagr	osis of pariodont	ice	OPR	\$	27,060	MRC
Co-investigator with Scot	-	_	•		OFN	Φ	27,000	MINC
The reaction of secretory		ith pe			OPR	\$	11,275	MRC
The reaction of secretory Operating		ith pe			OPR 2	\$ \$	11,275 38,335	MRC
Operating aculty of Education Type of Award	antibodies w		riodontal pathoge	MRC Source of Funds	2 <i>No</i> .	\$	38,335 Amount	MRC
Operating aculty of Education Type of Award Conferences	on No.	\$	riodontal pathoge Amount 7,500	MRC Source of Funds NSERC	No.	\$	38,335 Amount 6,946	MRC
Operating aculty of Education Type of Award	antibodies w		riodontal pathoge	MRC Source of Funds	No. 1 6 2	\$	38,335 Amount	MRC
Operating aculty of Education Type of Award Conferences Contracts	No.	\$	Amount 7,500 135,133	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal	No. 1 6 2 3	\$	Amount 6,946 28,353 129,133 253,270	MRC
Operating Caculty of Education Type of Award Conferences Contracts Operating	No.	\$	Amount 7,500 135,133 287,032	MRC Source of Funds NSERC SSHRC Other Provincial	No. 1 6 2	\$	Amount 6,946 28,353 129,133	MRC
Type of Award Conferences Contracts Operating Total	No. 2 3 14 19	\$ \$ \$ \$ \$	Amount 7,500 135,133 287,032 429,665	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal Other Agencies	No. 1 6 2 3 7	**	Amount 6,946 28,353 129,133 253,270 11,963	MRC
Operating aculty of Education Type of Award Conferences Contracts Operating Total epartment of Education	No. 2 3 14 19	\$ \$ \$	Amount 7,500 135,133 287,032 429,665	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal Other Agencies	No. 1 6 2 3 7	**	Amount 6,946 28,353 129,133 253,270 11,963	
Operating aculty of Education Type of Award Conferences Contracts Operating Total epartment of Education westigator umbarger, C S Adaptive change and lear	No. 2 3 14 19 nal Admin Project	\$ \$ \$ \$	Amount 7,500 135,133 287,032 429,665	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal Other Agencies Total	No. 1 6 2 3 7 19	**	Amount 6,946 28,353 129,133 253,270 11,963 429,665	
Type of Award Conferences Contracts Operating Total epartment of Education vestigator umbarger, C S Adaptive change and leaklos, E Practice and study of edu	No. 2 3 14 19 nal Admin Project dership in a p	\$ \$ \$ istra	Amount 7,500 135,133 287,032 429,665	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal Other Agencies Total	No. 1 6 2 3 7 19	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 6,946 28,353 129,133 253,270 11,963 429,665 Amount	Agenc
Type of Award Conferences Contracts Operating Total epartment of Education vestigator umbarger, C S Adaptive change and lead iklos, E Practice and study of edu ixon, M Women and leadership in	No. 2 3 14 19 nal Admin Project dership in a p	\$ \$ \$ \$ istra Title sychic inistra	Amount 7,500 135,133 287,032 429,665	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal Other Agencies Total	No. 1 6 2 3 7 19 Award OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 6,946 28,353 129,133 253,270 11,963 429,665 Amount 1,000	<i>Agenc</i> y
Type of Award Conferences Contracts Operating Total Department of Education Exercise of	No. 2 3 14 19 nal Admin Project dership in a p	\$ \$ \$ \$ istra Title sychic inistra	Amount 7,500 135,133 287,032 429,665	MRC Source of Funds NSERC SSHRC Other Provincial Other Federal Other Agencies Total	No. 1 6 2 3 7 19 Award OPR OPR	\$	Amount 6,946 28,353 129,133 253,270 11,963 429,665 Amount 1,000 667	<i>Agenc</i> AARN UCEA

Department of Education	al Founds	ation	ne					
Investigator	Project		13		Award		Amount	Agency
Bacchus, M K								
Co-investigator with Torre	s, C: A comp	arativ	e study of adult	education				
· · · · · · · · · · · · · · · · · · ·				n American ethno- religious 87.	CFC	\$	5,500	SSHRC
	ship - Missior	nary e	ducation of slav	res and freedom (British West	OPR	\$	4,000	SSHRC
A comparative study of adult education in Tanzania, Mexico and Canada (the province of Alberta)						\$	225,000	IDRC
Jrion, C Classroom interaction and	l student nerf	orma	nce (India/Cana	ida)	OPR	\$	24,060	IDRC
Visit of Dr. Shivanekar of I	OPR	\$	4,210	IDRC				
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences Operating Total	1 4 5	\$ \$	5,500 257,270 262,770	SSHRC Other Federal Total	2 3 5	\$ \$	9,500 253,270 262,770	
Department of Education	nal Psycho Project	_	y		Award		Amount	Agency
Gupta, R K							·	
Polydrug abuse, juvenile o Rodda. M	delinquency a	and pa	arental nuturano	ce	OPR	\$	1,500	AACES
Communication skills in de	eaf children a	and a	dults		OPR	\$	6,946	NSERC
Sawatzky, D D Children in re-married fam Schmidt, W H	nilies. The fur	nction	ing of children in	re-married families	OPR	\$	5,000	SSHRC
William Stern's critical and assessment of Herman El				with special emphasis on his echner	OPR	\$	1,000	AACES
Sobsey, R J Severe and Multiple Hand 6-8/87	licap Alternat	ive F	utures Conferen	ce, University of Alberta, May	CFC	\$	2,000	SSHRC
rewchuk, C R					OPR	\$		
Career programming for g	Career programming for gifted females						5,000	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences Operating Total	1 5 6	\$ \$	2,000 19,446 21,446	NSERC SSHRC Other Agencies	1 3 2	\$ \$ \$	6,946 12,000 2,500	

Source of Funds

Other Agencies

No.

4 \$

Amount

8,177

Type of Award

Contracts Operating **Total** No.

1 \$ 3 \$ **4** \$

Amount

6,000 2,177 **8,177**

vestigator	Project Ti	itle		Award		Amount	Agency
appin, D A				OTD		50.000	450
Microcomputer supporte ing, T T	ed simulations for	r administrator edu	cation	CTR	\$	50,633	AED
Production of a series of elementary French lange			to be used to inservice	CTR	\$	78,500	AED
Contracts			Other Provincial	2	\$	129,133	
epartment of Seconda	nry Education	n					
vestigator	Project Ti	tle		Award		Amount	Agency
son, A T Co-investigator with Signing Gurdson, S E	urdson, S E: Ach	nievement test prep	aration				
Achievement test prepa	ration			OPR	\$	1,286	AACES
n Manen, M Human science pedago	gy			OPR	\$	6,853	SSHR
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	2	\$ 8,139	SSHRC	1	\$	6,853	
			Other Agencies Total	1 2	\$ \$	1,286 8,139	
aculty of Enginee	ering No.	Amount	Source of Funds	No.		Amount	
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer	No. 30 4 6 146 3	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 136 23 16 14 189	\$ \$ \$ \$ \$ \$	Amount 4,040,461 1,226,049 827,172 307,073 6,400,755	
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total aculty of Engineering	No. 30 4 6 146 3 189	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies	136 23 16 14 189	\$ \$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755	Agenc
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total aculty of Engineering vestigator	No. 30 4 6 146 3	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies	136 23 16 14	\$ \$ \$	4,040,461 1,226,049 827,172 307,073	Agenc
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total aculty of Engineering evestigator	No. 30 4 6 146 3 189	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies Total	136 23 16 14 189	\$ \$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755	<i>Agenc</i> BVI
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total Caculty of Engineering avestigator ean	No. 30 4 6 146 3 189	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies Total	136 23 16 14 189	\$ \$ \$ \$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755	
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total Caculty of Engineering Expectigator The insupport of the Canad Operating	No. 30 4 6 146 3 189 Project To	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies Total Engineering Research Other Agencies	136 23 16 14 189 Award	\$ \$ \$ \$ \$ \$ \$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755 <i>Amount</i>	
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total aculty of Engineering ean In support of the Canad Operating Department of Chemica	No. 30 4 6 146 3 189 Project To	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies Total Engineering Research Other Agencies	136 23 16 14 189 Award	\$ \$ \$ \$ \$ \$ \$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755 <i>Amount</i>	BVI
Type of Award Contracts Equipment Infrastructure Operating Technology Transfer Total Caculty of Engineering Expectigator Total Operating Operating Department of Chemical Expectigator Huang, K T Research involving a new	No. 30 4 6 146 3 189 Project To ian Center for Are el Engineerin Project To ew process for co	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies Total Engineering Research Other Agencies	136 23 16 14 189 Award OPR 1 Award	\$\$\$\$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755 <i>Amount</i> 3,000 3,000 <i>Amount</i>	BVI Agenc
Contracts Equipment Infrastructure Operating Technology Transfer Total Faculty of Engineering Envestigator Fean In support of the Canad Operating Operating Department of Chemical Envestigator Chuang, K T	No. 30 4 6 146 3 189 Project To ian Center for Are el Engineerin Project To ew process for co	\$ 1,857,061 \$ 261,703 \$ 192,220 \$ 4,010,952 \$ 78,819 \$ 6,400,755	NSERC Other Provincial Other Federal Other Agencies Total Engineering Research Other Agencies	136 23 16 14 189 Award	\$ \$ \$ \$ \$	4,040,461 1,226,049 827,172 307,073 6,400,755 <i>Amount</i> 3,000 3,000	Agency

Investigator	Project Title	Award		Amount	Agency
Dalla Lana, I G					
	ing of coal-derived liquids	OPR	\$	53,000	AENR
Co-investigato	or with Wanke, S E: Investigations of catalytic gas-phase				
gas oils, and 3	kinetics and equilibrium in acidgas processing, 2) hydroprocessing of heavy B) IR and TPD applications in heterogeneous catalysis	OPR	\$	30,939	NSERC
_	or with Gray, M R: Fourier - Transform infra-red spectrometer				
	or with Wanke, S E: Optimal chemical routes for heavy				
Fisher, D G Computer con	trol of multivariable processes	OPR	\$	39,190	NSERC
Adaptive proc	•	OPR	\$	53,630	NSERC
• •	f artificial intelligence in the process industries	OPR	\$	30,000	NSERC
Gray, M R	for all in making long	000	Φ.	05.750	A MAID
	f coal in natural gas	OPR	\$	35,750	AENR
	racterization of heavy oil and bitumen upgrading reactions or with Tam, Y K (Pharmacy and Pharmaceutical Sciences): Pharmacokinetics	CTR	\$	66,600	AOSTR
of lidocaine du					
	or with Wanke, S E: Investigations of catalytic gas-phase				
_	or with Hrudey, S E (Civil Engineering): Role of support media in enhancing				
Fourier - Trans	sform infra-red spectrometer with gas chromatograph	EQP	\$	101,371	NSERC
Co-investigato fermentation .	or with Westlake, D W (Science, Microbiology): Technical support for				
	tics of complex mixtures	OPR	\$	20,626	NSERC
	or with Wanke, S E: Optimal chemical routes for heavy				
Numerical mo Lynch, D T	delling of multiphase chemical reactors	OPR	\$	13,407	NSERC
	or with Wanke, S E: Investigations of catalytic gas-phase				
Dynamic beha	avior of chemical and catalytic reactors	OPR	\$	23,904	NSERC
Masliyah, J H	and the same of th	OTD	•	74.070	AOCTO
	n columns to improve oil recovery from Alberta oil sands	CTR	\$	74,670	AOSTR
Fluid-particles	or with Nandakumar, K: Enhancement of gravity separation	OPR	\$	35,000	NSERC
Mather, A E	dynamics	0111	Ψ	00,000	NOLINO
	or with Otto, F D: Gas treating technology				
•	nic properties of fluids	OPR	\$	22,176	NSERC
	ria in gas treating solutions	OPR	\$	10,900	PAE
Morris, A J Real time com	nputer supervision and control of process systems	OPR	\$	17,600	NSERC
	or with Fisher, D G: Adaptive process control	•	•	,	
•	or with Fisher, D G: Applications of artificial intelligence				
Nandakumar, K		OTD	•	50.700	4 0 0 T D
	of gravity separation of two-species suspensions	CTR	\$	50,730	AOSTR
Computationa Otto, F D	and experimental investigation of bifurication phenomena in flow problems	OPR	\$	25,783	NSERC
	ng technology/gas-liquid operations	OPR	\$	23,000	NSERC
Gas treating to	•	OPR	\$	67,400	NSERC
Robinson, D B	•	OTE	ው	04.400	AICE
	quilibrium in selected binary systems	CTR OPR	\$ \$	21,190 40,608	AICE NSERC
	havior and properties of selected hydrocarbon - non-hydrocarbon mixtures, ose containing carbon dioxide, methanol and/or hydrogen sulfide	OPR	Φ	40,000	NOENU
Shah, S L		OT D	~	45.070	DOW!
,	on of GPC control algorithm in Dow's VAX or VAXmate computer	CTR	\$	15,072	DOW
Robustness is Wanke, S E	sues in adaptive control	OPR	\$	22,500	NSERC
	of catalytic gas-phase polymerization of ethylene	CTR	\$	70,000	NCOR
	on and activity of supported metal catalysts	OPR	\$	36,384	NSERC
Optimal chem	ical routes for heavy oil upgrading	OPR	\$	72,120	NSERC
Wood, R K		ODD	ø	10 564	NSEDO
Dynamics and	d control of process systems	OPR	\$	18,564	NSERC

Type of Award	No.	Amount	Source of Funds	No.		Amount
Contracts	7	\$ 344,962	NSERC	20	\$	720,202
Equipment	1	\$ 101,371	Other Provincial	6	\$	304,450
Operating	23	\$ 742,181	Other Federal	1	\$	46,700
Total	31	\$ 1,188,514	Other Agencies	4	\$	117,162
		• •	Total	31	Ś	1,188,514

Department of Civil Engineering

Investigator	Project Title	Award		Amount	Agency
Anderson, K O					
Influence of asphalt cemer in Alberta	at properties on the high temperature performance of pavements	CTR	\$	14,000	AT
Rehabilitation of full-depth	asphalt concrete pavements in Alberta	CTR	\$	29,674	AT
Evaluation of asphalt ceme	ents for low temperature performance	OPR	\$	8,000	IOL
Recycling of asphalt paven	nents	OPR	\$	13,000	NSERC
han, D H					
_	P, P K: Numerical simulation of room 209				
	nstern, N R: Coal research grant program - Deformation				
	strain softening soil and shear band deformation	OPR	\$	12,000	NSERC
Co-investigator with Morge	nstern, N R: Geotechnical laboratories - University				
heng, J J R	and an also and a constant of all Parts day	OTB	•		
	wood panels under concentrated static loads	CTR	\$	10,000	ARC
Lateral and local instability	of coped beams	OPR	\$	11,520	NSERC
ruden, D M A landslide overview map of	of Alberta - Phase II	CTR	\$	10.000	AE
-				10,000	
	ion of materials in slope movements in the Cordillera	OPR	\$	8,000	EMRC
isenstein, Z	enstern, NR: Geotechnical laboratories - University				
Slope stability (Brazil)		OPR	\$	61,140	IDRC
• • • • •	in soft ground (2) Tunnels and shafts in oil sands (3) Effective	OPR	\$	39,000	NSERC
stresses around excavation	ns	Orn	Ψ	39,000	NOLITO
lwi, A E	enstern, N R: Geotechnical laboratories - University				
	el tubes under transverse loads and 2) Numerial prediction of	OPR	\$	14,650	NSERC
hopper loads	or tubos under transverse loads and 2) Numerial prediction of	Oili	Ψ	14,030	NOLITO
ierard, R					
River, lake and offshore ice	e processes	OPR	\$	19,200	NSERC
latzinikolas, M					
Research in masonry vene	er walls	OPR	\$	12,000	NSERC
rudey, S E Risk assessment in water t	reatment	ODD	Φ	0.500	C.E.
		OPR	\$	3,500	CE
Hazardous waste manager		OPR	\$	33,500	NSERC
	nhancing anaerobic biotreatment of phenolics	OPR	\$	46,200	NSERC
	n, R B (Science, Chemistry): Mass spectometry service				
laboratory	to book of the state of				
Environmental process bio rudey, T M	technology laboratory	INF	\$	57,600	NSERC
Ice loads on structures		OPR	\$	12,000	NSERC
uck, P M		OFN	Ψ	12,000	NOENC
	ftware to model the performance of carbon absorbers in a large eatment plant	CTR	\$	7,824	HWC
	corption of mutagens on XAD-2 resin	CTR	\$	49,168	HWC
	s in drinking water treatment	CTR	\$	113,524	NRC
Removal of organics from		OPR	Ψ \$	24,000	NSERC
•	cess for removal of radium-226 from uranium tailings decants				
	y, S E: Environmental process biotechnology	TTR	\$	24,600	NSERC
-	surement apparatus and drinking water pilot plant refurbishment	EQP	\$	88,016	NSERC
	ological treatment of drinking water	OPR	φ \$	134,106	NSERC
lunt, J D	ological troatment of annihing water	OFR	Ψ	194,100	NOLITO
, - =	elling	OPR		15,000	NSERC

Investigator	Project Title	Award		Amount	Agency
Kaiser, P K	•				
	nulation of room 209 instrument ring	CTR	\$	59,558	AECL
Rupture mech	nanisms of underground openings	OPR	\$	7,741	NSERC
Co-investigate	or with Morgenstern, N R: Geotechnical laboratories - University				
Kennedy, DJL	•				_
-	of corrugated steel culverts	CTR	\$	33,976	AT
-	loaded clamped steel plates. Composite steel-concrete trusses	OPR	\$	37,000	NSERC
· · ·	nprove the bridge evaluation model	CTR	\$	41,600	SHT
	gth of concrete-filled steel hollow structural sections	OPR	\$	10,655	SSEF
Knettig, E	annith Hundan C.F. Funinamental avacasa histochaolagu				
_	or with Hrudey, S E: Environmental process biotechnology	000	Φ.	40.000	NOEDO
Kulak, G L	crobial degradation of chlorinated phenols	OPR	\$	10,000	NSERC
	er tubes loaded in shear or in combined shear and bending	OPR	\$	30,720	NSERC
Longworth, J	or topool toudou in orion or in commence orion and something	• • • • • • • • • • • • • • • • • • • •	*	00,120	
Behavior of m	asonry structures	OPR	\$	11,520	NSERC
MacGregor, J G			_		
=	stability of reinforced concrete structures	OPR	\$	62,400	NSERC
	or with Kennedy, D J L: A project to improve the bridge				
Morgenstern, N R	grant program. Deformation and programsive failure of open pit mine highwall	OPR	\$	25,188	AENR
	grant program - Deformation and progressive failure of open pit mine highwall or with Scott, J D: Geotechnical and thermal testing	OFN	Ф	23,100	ALIND
•	· · · · · · · · · · · · · · · · · · ·				
	or with Sego, D C: Sample preparation of sand containing	000	•	100.100	NOEDO
	behaviour of permafrost, oil sands and other natural materials	OPR	\$	100,160	NSERC
	laboratories - University of Alberta	INF	\$	11,000	NSERC
Murray, D W Prediction of	structural behaviour	OPR	\$	26,000	NSERC
Peterson, A E	Structural behaviour	0, ,,	Ψ	20,000	HOLHO
	dy for an aggregate information system - Alberta	CTR	\$	14,728	AT
Nahanni rock	slide - digital model	CTR	\$	1,500	EMRC
Peterson, A W	•				
	ned in sediment	OPR	\$	18,528	NSERC
Rajaratnam, N	fisheren afflicant discharges into lekes and rivers LDA massurements and	OPR	æ	40 104	NCEDO
	fishways: effluent discharges into lakes and rivers, LDA measurements, and aulations in hydraulics	OPR	\$	43,104	NSERC
Scanion, A	idiations in Hydraulics				
•	of concrete structures	OPR	\$	18,000	NSERC
•	or with Kennedy, D J L: A project to improve the bridge				
Scott, J D					
Geomechanic	cal laboratory testing program	OPR	\$	80,000	AOSTR
	or with Kerr, N (Home Economics, Clothing and Textiles): Well sand control				
with geotextile	9				
Geotechnical	and thermal testing of oil sands	CTR	\$	147,756	AOSTR
Devon test fill		CTR	\$	34,507	AT
Core sampler	for oil sands and heavy oil formations	OPR	\$	75,340	NSERC
	of oil sands sludge, soil-geosynthetic systems	OPR	\$	31,000	NSERC
Co-investigat	or with Morgenstern, N R: Geotechnical laboratories - University				
Testing progr	am on gas in oil sands	CTR	\$	100,156	SCL
Sego, D C					
•	or with Scott, J D: Devon test fill				
	aration of sand containing a gas hydrate - phase 4	CTR	\$	27,338	GSC
	epositional process on physical characteristics of hydraulic fills	OPR	\$	8,000	IOL
Strength and	deformation behavior of frozen and unfrozen soil	OPR	\$	13,000	NSERC
	or with Morgenstern, N R: Geotechnical laboratories - University				
Simmonds, S H		ODD	ø	E 000	DCI
Slab column		OPR	\$	5,000	DCL
	concrete slabs 2) Shell structures	OPR	\$	23,650	NSERC
Smith, D W	f wastewater using ozone	OPR	\$	30,720	NSERC
		OFR	Ψ	30,720	HOLITO
_	or with Huck, P M: Process optimization for biological				
_	or with Hrudey, S E: Environmental process biotechnology				
Co-investigat Steffler, P M	or with Huck, P M: Bacterial growth rate measurement				
	v in open channels and rivers	OPR	\$	16,650	NSERC
i dibaloni nov	apan anamaia ana maia	Ο 1 11	Ψ	. 0,000	

Investig	estigator Project Title						Amount	Agency
Teply,		e of Canadia	a communities		OPR	¢	27 840	NSEDO
Thoms	Transportation characteristic on, S	o oi Ganadial	Communities		UPH	\$	27,840	NSERC
	Co-investigator with Cruden,	, D M: A lands	slide overview ma	p of Alberta				
(Co-investigator with Morgens	stern, NR: Co	oal research gran	t program - Deformation				
		and behaviou	r of stiff clay (till) s	soft rocks and their application to	OPR	\$	10,000	NSERC
	engineering projects	= -						
Warwa	Co-investigator with Morgen:	stern, NR: G	eotechnical labora	atories - University				
	Research in structural maso	nrv			OPR	\$	16,000	NSERC
						7		-
	Type of Award	No.	Amount	Source of Funds	No.		Amount	
	Contracts	16 \$		NSERC	37	\$	1,176,765	
	Equipment Infrastructure	1 \$ 2 \$	88,016 68,600	Other Provincial Other Federal	10 8	\$ \$	399,829 328,052	
	Operating	42 \$		Other Rederal Other Agencies	7	φ \$	176,911	
-	Technology Transfer	1 \$	24,600	Total	62	\$	2,081,557	
•	Total	62 \$	2,081,557					
Depar	rtment of Electrical E	ngineering	1					
Investig		Project Titl	•		Award		Amount	Agency
Baltes,		T TOJECT TIL			71114111		·	Agency
	n P Integrated sensors on silicor	า			OPR	\$	60,000	NSERC
	Microelectronic sensors and				OPR	\$	61,000	NSERC
Bolling	er, K E	_				·		
	Power system control				OPR	\$	13,600	NSERC
Brett, N	<i>ท</i> J Thin films for sensor applica	tions			OPR	\$	22,000	NSERC
	Co-investigator with Baltes,		ed sensors on silic	con	0.11	Ψ	22,000	HOLHO
Capjac	k, C E		5555.5 611 6111					
	Computer simulation codes		• •		OPR	\$	21,120	NSERC
	Co-investigator with Seguin,	_						
	Co-investigator with Seguin,			•	A BB	Φ	44.000	NOEDO
	The development and use of supporting laser-plasma inte			uter simulation codes for to establish the feasibility of laser	OPR	\$	44,900	NSERC
	driven inertial fusion	nacion exper	onio designed	to ostabilish the reasibility of laser				
	Co-investigator with Offenbe	erger, A A: Krl	aser facility					
Cerven	an, M R		-					
	Co-investigator with Seguin,			<u> </u>				
	Co-investigator with Seguin, Mode of Stabalization of a M	-	-	m (DCS)	OPR	ው	10.000	NSERC
Cheng,		iuitikilowatt C	.vv. OOZ Laser		OPH	\$	19,200	NOENU
	Co-investigator with Seguin,	HJJ: High p	ower laser discha	arge stabilization				
Christe	ensen, G S				000	•	05.000	NOCOC
Chute,	Optimization methods applie	ea to electrica	power systems		OPR	\$	25,800	NSERC
	Electrical heating of oil sand	reservoirs			CTR	\$	95,000	AOSTR
	Electromagnetic techniques		recovery of hydro	carbon materials	OPR	\$	29,568	NSERC
Englefi	ield, C G		- ·		055	•	44.004	NOTEC
	Optical fibre communication ejevs, R	systems			OPR	\$	11,904	NSERC
	UV laser - plasma research				OPR	\$	40,560	NSERC
	Co-investigator with Offenbe	erger, A A: Krl	= laser technolog	y and fusion			•	
	Co-investigator with Offenbe						•	
Filanov	/sky, l	-			000	_	47.000	NOCOO
Girczy	Circuit techniques for integra	ated solid stat	e sensors		OPR	\$	17,280	NSERC
		nment includi	ng automated ch	ecking and synthesis	OPR	\$	16,000	NSERC
Goud,	STICM: An IC design environment including automated checking and synthesis Goud, P A							
	Coding and modulation for optical fiber communications						16,700	NSERC
	ourishankar, V G Co-investigator with Rink, R E: Optimized microprocessor control							
	Robotics control: Heat pump control						18,500	NSERC
James,	lames, C R						•	
	Laser-plasma interaction pro	ocesses			OPR	\$	11,500	NSERC

Investigator Project Title	Award		Amount	Agency
Joerg, W B				
Interactive framework for an integrated (VLSI) design environment	OPR	\$	21,216	NSERC
Kingma, Y J Co-investigator with Bowes, K L (Medicine, Surgery and Clinical Surgery): G I motility				
studies				
Electrical and mechanical activity of the digestive tract: Modeling, instrumentation and analysis. Robotic aids for quadriplegics	OPR	\$	16,800	NSERC
Koval, D O				
Theoretical modelling of power system disturbances and microelectronic systems Krzymien, W A	OPR	\$	10,000	NSERC
Nonlinear equalization systems for high speed digital transmission	OPR	\$	11,194	NSERC
Landecker, T L Radio astronomy instrumentation development and Supernova remnant research	OPR	\$	14 100	NSERC
Lawson, R P W	OFR	Φ	14,100	NOERU
Low energy ion implantation/high vacuum technology Marchand, R	OPR	\$	11,700	NSERC
Modelling of laser-plasma interactions	OPR	\$	3,319	NSERC
Co-investigator with Capjack, C E: The development and use of magnetohydrodynamic				
Co-investigator with Offenberger, A A: KrF laser facility McMullin, J N				
University of Alberta integrated optics laboratory	EQP	\$	39,570	NSERC
Improvement in coupling of semiconductor lasers to single mode fibers	OPR	\$	13,248	NSERC
Merchant, V Co-investigator with Seguin, H J J: High power laser discharge stabilization				
Co-investigator with Seguin, H J J: Digitizing camera system (DCS)				
Mowchenko, J T Placement and routing algorithms for cell-based integrated circuit design	OPR	\$	14,784	NSERC
Nikumb, N	Orn	Ψ	14,704	NOERC
Co-investigator with Seguin, H J J: High power laser discharge stabilization				
Co-investigator with Seguin, H J J: Digitizing camera system (DCS) Offenberger, A A				
KrF laser technology and fusion research	OPR	\$	140,000	NSERC
High intensity laser/plasma interactions	OPR	\$	86,400	NSERC
KrF laser facility Rink, R E	INF	\$	67,800	NSERC
Optimized microprocessor control of heat pump/heat storage systems	OPR	\$	10,000	EMRC
Information processing in feedback control Ristic, L	OPR	\$	11,232	NSERC
Silicon sensor technology	OPR	\$	18,700	NSERC
Co-investigator with Baltes, H P: Integrated sensors on silicon				
Robinson, A M Absorption in CO2 at elevated temperatures and pressures	OPR	\$	17,800	NSERC
Co-investigator with Seguin, H J J: High power laser discharge stabilization				
Routledge, D Radio synthesis mapping of Supernova remnants, and development of low-noise receivers	OPR	\$	13,920	NSERC
Co-investigator with Vaneldik, J F: Low-noise microwave amplifier development	0	*	.0,020	1102.10
Schmidt-Weinmar, H G Electro-optics of silicon-germanium superlattices	OPR	æ	12 000	NCEDO
Seguin, H J J	OPH	\$	12,900	NSERC
High powered laser technology and laser materials science and processing	OPR	\$	66,500	NSERC
Digitizing camera system (DCS) High power laser discharge stabilization with magnetic fields	EQP OPR	\$ \$	32,746 60,000	NSERC NSERC
Smy, PR	OFR	Ψ	00,000	
The use of electrically induced turbulence in combustion	OPR	\$	60,000	NSERC
Combustion physics Co-investigator with Seguin, H J J: High power laser discharge stabilization	OPR	\$	52,954	NSERC
Stromsmoe, K A				
Integrated circuit oscillators for instrumentation applications Tinga, W R	OPR	\$	5,000	NSERC
Microwave applicator design and microwave measurements	OPR	\$	14,000	NSERC
Tulip, J Laser Applications and Engineering Research Institute Limited	CTR	\$	300,000	DRIE
Endoscopic laser systems	OPR	φ \$	80,000	NSERC
High powered lasers, medical application	OPR	\$	46,656	NSERC
Vaneldik, J F Low-noise microwave amplifier development laboratory	INF	\$	34,700	NSERC
Radio astronomy receiving system development, supernova remnant studies	OPR	\$	15,000	NSERC
, , , , , , , , , , , , , , , , , , , ,		-	,	· · •

Investigator	Project Title			Award		Amount	Agency
Vermeulen, F E							
Co-investigator with Chu	ıte, F S: Electrical I	heating of oil san	nd				
Use of electromagnetic	heating for the in-s	itu recovery of fo	ssil fuels	OPR	\$	30,500	NSERC
oss, W A G Microwave power and in	etrumentation			OPR	\$	27,168	NSERC
wholewave power and m	Stramentation			0, ,,	Ψ	27,100	1102110
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts	2 \$	395,000	NSERC	47	\$	1,479,539	
Equipment	2 \$	72,316	Other Provincial	1	\$	95,000	
Infrastructure	2 \$ 44 \$	102,500 1,314,723	Other Federal Total	2 50	\$ \$	310,000 1,884,539	
Operating Total	50 \$	1,884,539	TOtal	50	Ą	1,004,555	
Department of Mechanic	cal Engineerin	ng					
Investigator	Project Title	•		Award		Amount	Agency
Bellow, D G							
Sucker rod development	•			OPR	\$	8,000	IOL
Static and dynamic beha	avior of machine el	ements		OPR	\$	21,190	NSERC
	reau, M J (Medicino	e, Medicine and	Clinical Medicine): Experimenta	I			
evaluation of spinal				0	•	144 646	NOTES
Reinforced openings/fraction	cture mechanics			OPR	\$	11,940	NSERC
Checkel, M D Turbulence - combustion	Turbulence - combustion interaction for spark ignition engines						
Cheng, K C	OPR	\$	14,680	NSERC			
Studies of cold regions a	OPR	\$	37,350	NSERC			
Colbourne, J R Gear geometry and tootl	h strenath			OPR	\$	17,682	NSERC
Craggs, A	o o g				•		
Finite element acoustics	3			OPR	\$	21,080	NSERC
A computer program for				OPR	\$	45,820	NSERC
Co-investigator with Fau	ılkner, M G: Mecha	inical engineerin	g acoustics				
Date, J D Energy conservation in I	housing			OPR	\$	80,000	AENR
Combustion ignition stud	~	tion engine nerfo	ormance	OPR	\$	21,596	NSERC
Ellyin, F	ules and spark igin	tion engine pend	manoc	0111	Ψ	21,550	NOLITO
Materials response and	reliability of compo	nents under vari	ious states of stress and	OPR	\$	46,560	NSERC
environments							
Faulkner, M G Hearing protection device	re evaluation			OPR	\$	5,000	ACOH
Mechanics of dental pro		estina technique	e	OPR	\$	21,080	NSERC
Mechanical engineering				INF	\$	9,120	NSERC
Co-investigator with Cra			et and	11 %1	Ψ	3,120	NOLITO
Forest, T W	iggs, m. moompate	n program for de	ot und				
Co-investigator with Gat	tes, E M: Marine ic	ing wind tunnel .					
Phase changes in liquid	ls and porous med	ia		OPR	\$	18,244	NSERC
Gates, E M	rowski E.D.(Soion	oo Coography):	Marina joina				
Co-investigator with Loz	•	se, Geography).	Manne ichig	INF	\$	12,000	NSERC
Marine icing wind tunne				TTR			NSERC
A waterjet evacuation to		_			\$	8,664	
Modelling of atmospheri Haddow, J B	ic iding of structure	5		OPR	\$	14,680	NSERC
Studies in non-linear wa	ve propogation	•		OPR	\$	22,240	NSERC
Kennedy, J S							
Elastohydrodynamic lub	prication of soft mat	terials. Blood flov	w to the kidneys	OPR	\$	9,710	NSERC
Lipsett, A W Dynamic response of of	fshore structures in	n waves and curr	rents	OPR	\$	14,910	NSERC
Lock, G S H				3	+	,	
Co-investigator with Loz	·						
Co-investigator with Loz	zowski, E P (Scienc	ce, Geography):	Instrumentation for the				
measurement		ne contract of the second		000	•	45 400	NOCOC
(1) Heat transfer near p	_			OPR	\$	15,120	NSERC
Co-investigator with Gar	tes, ∟ M: Marine ic	ing wind tunnel.	••				
Mioduchowski, A Vibrations of elastic eler	ments of media			OPR	\$	19,028	NSERC
VIDIALIONS OF CIASUC CICE	mento di media			OF IT	Ψ	13,020	HOLITO

Investigator	Project	Title			Award		Amount	Agency
Rodkiewicz, C M								
Arterial blood flow: lubrica	ation				OPR	\$	29,090	NSERC
Simms, B W Information processing ma	odel of techn	ical o	rganizations		OPR	\$	9,600	NSERC
Toogood, R W			_			Ψ		
Industrial robotics - Dynar Varty, R L	mic simulation	n and	motion plannin	9	OPR	\$	12,457	NSERC
Measurement of two-phas	se flows				OPR	\$	16,000	NSERC
Wilson, D J Predicting exposure haza	rde from tovi		rologoog		OPR	φ	20.400	ACOLI
Atmospheric pollution disp		_		ation into buildings	OPR	\$ \$	38,400 30,882	ACOH NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Infrastructure	2	\$	21,120	NSERC	25	\$	500,723	
Operating _	26	\$	602,339	Other Provincial	3	\$	123,400	
Technology Transfer Total	1 29	\$ \$	8,664 632,123	Other Agencies Total	1 29	\$ \$	8,000 632,123	
		*	002,120		20	Ψ	002,720	
Department of Mining, M	_		nd Petroleur	n Engineering	Account		4	4
Investigator Barron, K	Project	riue		10.000	Award		Amount	Agency
Modelling and analysis of	outbursts at	#26 C	Colliery Glace B	ay, Nova Scotia	OPR	\$	6,000	EMRC
Design criteria for pillars in	n coal mines		·		OPR	\$	18,528	NSERC
Bentsen, R G	ant of ana flu	id by	anathar		OPR	φ	10.000	NCEDO
Analysis of the displacement Berkowitz, N	ent of one nu	шыу	anomen		OFR	\$	18,000	NSERC
Generation of synthetic oi	ls from 'unco	nvent	ional' sources		OPR	\$	32,349	NSERC
Etsell, T H Ceramic electrolytes and	metal extract	ion fr	om flv ash		OPR	\$	18,000	NSERC
Co-investigator with Scarf				pressure laboratory for		•	,	
research								
Extractive metallurgy Farouq Ali, S M					OPR	\$	2,000	WMJ
Mobility control					CTR	\$	127,460	AOSTR
Scaled model studies of the	he immiscible	carb	on dioxide flood	ding process	CTR	\$	120,660	AOSTR
Realistic simulation of formance prediction	mation fractu	ring d	uring steam inje	ection operations and	CTR	\$	55,250	AOSTR
Steam injection experime	nts in a scale	d phy	sical model - Pl	hase II	CTR	\$	39,420	EMRC
Steam injection experime	nts in a scale	d phy	sical model - P	hase III	CTR	\$	79,000	EMRC
Flintoff, B C Co-investigator with Plitt,	L R: Laborato	orv sii	mulation of coal	flotation				
Golosinski, T S		•						
Investigations into continu			-	 -	OPR	\$	6,000	EMRC
Diggability of plains overb	urdens with I	oucke	twheel excavat	ors	OPR	\$	14,000	NSERC
Oil sand conveying Ivey, D G					TTR	\$	45,555	NSERC
Electron microscopy char	acterizations	of se	miconductor de	vices	OPR	\$	16,800	NSERC
	Plitt, L R Laboratory simulation of coal flotation						12,000	EMRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	5	\$	421,790	NSERC	7	\$	163,232	
Operating	10	э \$	143,677	Other Provincial	3	э \$	303,370	
Technology Transfer								
Total	16	\$	611,022	Other Agencies	1	\$ \$	142,420 2,000	
				Total	16	\$	611,022	

Faculty of Extension

Type of Award	No.	Amount	Source of Funds	No.	Amount
Infrastructure	1	\$ 3,950	Other Agencies	1	\$ 3,950
Total	1	\$ 3,950	Total	1	\$ 3.950

Faculty of Extension

Investigator	Project Title	Award	Amount	Agency
Bray, C				
Title word index	- Canadian women's periodicals	INF \$	3,950	CRIAW

Ćo-investigator with Hawkins, M H (Agriculture and Forestry, Rural Economy): The delivery of extension services . . .

Faculty of Home Economics

Type of Award	No.		Amount	Source of Funds	No.	Amount
Conferences	1	\$	6,049	NSERC	6	\$ 259.605
Contracts	1	\$	36,256	SSHRC	1	\$ 22,386
Operating	14	\$	499,812	Other Provincial	4	\$ 197,456
Total	16	\$	542,117	Other Agencies	5	\$ 62,670
		•	•	Total	16	\$ 542.117

Department of Clothing and Textiles

Investigator	Project Title	Award	Amount	Agency
Crown, E M				
Syster	matic assessment of protective clothing for Alberta workers	OPR	\$ 73,200	ACOH
Evalua	ation of protective work wear for agricultural workers	OPR	\$ 45,000	ARCA
Kerr, N	· · · · · · · · · · · · · · · · · · ·			
Well s	and control with geotextile filters: Feasibility study	CTR	\$ 36,256	AOSTR
Co-inv	restigator with Crown, E M: Evaluation of protective work wear			
Lambert, A	·			
	ation costumes: Their effect on children's cognitive and affective response in an c site environment	OPR	\$ 1,500	AMUSA

Richards, E A

Co-investigator with Kerr, N: Well sand control with geotextile . . .

Co-investigator with Scott, J D (Engineering, Civil Engineering): Devon test fill . . .

Rigakis, K B

Co-investigator with Crown, E M: Systematic assessment of protective . . .

Type of Award	No.	Amount	Source of Funds	No.	Amount
Contracts	1	\$ 36,256	Other Provincial	3	\$ 154,456
Operating	3	\$ 119,700	Other Agencies	1	\$ 1,500
Total	4	\$ 155,956	Total	4	\$ 155,956

estigator	Project	Title			Award		Amount	Agency
rlbut, N L								
Co-investigator with K	(ieren, DK: Probl	em so	olving phasing ir	n families				
eren, D K					OPR			
Problem solving phasing in families with an adolescent diabetic						\$	22,386	SSHRC
orrison, F J						φ	6.040	NOCDO
"Readin', 'Ritin and 'Rithmetic: Children's learning of basic skills" Conference in Edmonton, Alberta, May, 1988						\$	6,049	NSERC
Word learning in read	ing disabled shile	dron			OPR	\$	22.856	NSERC
word learning in read	ing disabled child	JI C II			OFR	Ψ	22,650	NOENC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	6,049	NSERC	2	\$	28,905	
Operating	2 3	\$	45,242	SSHRC	1	\$	22,386	
Total	3	\$	51,291	Total	3	\$	51,291	
epartment of Foods					Award		Amount	Agency
partment of Foods	and Nutrition	ŀ						
estigator	Project			······································	Award		Amount	Agency
restigator su, T K	Project	Title						
su, T K Dental, dietary and nu	Project	Title	oup of elderly pe	eople in Edmonton	Award OPR	\$	Amount 3,270	Agency KSC
su, T K Dental, dietary and nu	Project utritional survey o	Title of a gro	•	·	OPR		3,270	KSC
su, T K Dental, dietary and nu andinin, M T Modulation of adipocy	Project utritional survey o	Title If a gro	ctions by change	es in diet fat composition		\$ \$		
su, T K Dental, dietary and nu andinin, M T Modulation of adipocy Co-investigator with T	Project utritional survey of the insulin receptor thomson, A B R (Title If a gro	ctions by change	·	OPR		3,270	KSC
su, T K Dental, dietary and nu andinin, M T Modulation of adipocy Co-investigator with T period programming.	Project utritional survey of the insulin receptor thomson, A B R (Title If a gro	ctions by change	es in diet fat composition	OPR OPR	\$	3,270 47,000	KSC CDA
su, T K Dental, dietary and number of and inin, M T Modulation of adipocy Co-investigator with T period programming . Collaborative research	Project utritional survey of the insulin receptor homson, ABR(Title of a groot function Medical	ctions by chango sine, Medicine a	es in diet fat composition	OPR OPR	\$	3,270 47,000 400	KSC CDA NORAC
su, T K Dental, dietary and numerical materials and mater	Project Itritional survey of the insulin receptor thomson, A B R (the ane structure and	Title f a gro or func Medic	ctions by change sine, Medicine a tion by diet fat	es in diet fat composition nd Clinical Medicine): Critical	OPR OPR OPR	\$ \$ \$	3,270 47,000 400 58,500	KSC CDA NORAC NSERC
su, T K Dental, dietary and numerical dieta	Project Itritional survey of the insulin receptor thomson, A B R (the ane structure and	Title f a gro or func Medic	ctions by change sine, Medicine a tion by diet fat	es in diet fat composition	OPR OPR	\$	3,270 47,000 400	KSC CDA NORAC
su, T K Dental, dietary and nu andinin, M T Modulation of adipocy Co-investigator with T period programming. Collaborative research Modulation of membra Demonstration of the and function in man	Project Itritional survey of the insulin receptor thomson, A B R (the ane structure and	Title f a gro or func Medic	ctions by change sine, Medicine a tion by diet fat	es in diet fat composition nd Clinical Medicine): Critical	OPR OPR OPR	\$ \$ \$	3,270 47,000 400 58,500	KSC CDA NORAC NSERC
su, T K Dental, dietary and numerical dieta	Project utritional survey of the insulin receptor thomson, A B R (f a groot function of the func	ctions by change sine, Medicine a tion by diet fat diet induced alte	es in diet fat composition nd Clinical Medicine): Critical	OPR OPR OPR	\$ \$ \$	3,270 47,000 400 58,500	KSC CDA NORAC NSERC
su, T K Dental, dietary and numerical dietary and research dietary and function in manumerical dietary and function of adiposition of adiposi	Project Itritional survey of the insulin receptor in	f a groot function of the following of t	ctions by change sine, Medicine a tion by diet fat diet induced alte nola oils	es in diet fat composition nd Clinical Medicine): Critical	OPR OPR OPR OPR	\$ \$ \$	3,270 47,000 400 58,500 114,000	KSC CDA NORAC NSERC NSERC
su, T K Dental, dietary and numerical dietary and period programming. Collaborative research dietary and function of membra and function in manowrysh, Z J Quality evaluations of Quality evaluations of	Project Itritional survey of the insulin receptor thomson, A B R (the ane structure and in vivo significant antioxidant treatments antioxidant treatments.	f a groot function of the following of t	ctions by change sine, Medicine a tion by diet fat diet induced alte nola oils	es in diet fat composition nd Clinical Medicine): Critical	OPR OPR OPR OPR	\$ \$ \$ \$	3,270 47,000 400 58,500 114,000 43,000 10,500	KSC CDA NORAC NSERC NSERC
su, T K Dental, dietary and numerical dietary and research dietary and function in manumerical dietary and function of adiposition of adiposi	Project Itritional survey of the insulin receptor thomson, A B R (the ane structure and in vivo significant antioxidant treatments antioxidant treatments.	f a groot function of the following of the function of the following of th	ctions by change sine, Medicine a tion by diet fat diet induced alte nola oils	es in diet fat composition nd Clinical Medicine): Critical	OPR OPR OPR OPR OPR	\$ \$ \$ \$ \$	3,270 47,000 400 58,500 114,000	KSC CDA NORAC NSERC NSERC ARCA CCC

Source of Funds

NSERC Other Provincial Other Agencies Total Amount

230,700 43,000 61,170 **334,870**

No.

\$ \$ \$ **\$**

No.

Type of Award

Operating

Faculty of Law

Type of Award	No.	Amount	Source of Funds	No.	 Amount
Infrastructure	4	\$ 109,801	Other Agencies	4	\$ 109,801
Total	4	\$ 109,801	Total	4	\$ 109,801

Amount

334,870

Facu	lty of	Law
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Investigator	Project Title	Award	Amount	Agency
Christian, T J				
Co-investigator with	Lown, P J M: Communications and labour law database			
Charter of Rights da	tabase	INF	\$ 33,968	ALF
Elman, B P				
Co-investigator with	Christian, T J: Charter of Rights database			
Lown, P J M	•			
Communications ar	d labour law database	INF	\$ 7,763	ALF
MacPherson, L V				
Alberta Case Locate	or database	INF	\$ 27,370	ALF
McLellan, A A				
Co-investigator with	Christian, T J: Charter of Rights database			
Robertson, G L				
Health Law databas	e (through Health Law Institute)	INF	\$ 40,700	ALF

Faculty of Medicine

Type of Award	No.		Amount	Source of Funds	No.	Amount
Conferences	7	\$	125,900	AHFMR	48	\$ 4,818,119
Contracts	10	\$	945,077	MRC	88	\$ 6,236,403
Equipment	20	\$	1,328,433	NSERC	8	\$ 462,792
Infrastructure	1	\$	12,000	SSHRC	1	\$ 37,509
Operating	201	\$	14,373,126	Other Provincial	16	\$ 1,140,295
Technology Transfer	2	\$	295,000	Other Federal	4	\$ 216,532
Total	241	\$	17,079,536	Other Agencies	76	\$ 4,167,885
		•	, ,	Total	241	\$ 17.079.536

Faculty of Medicine

nvestig	ator	Project	Title			Award		Amount	Agency
	Development of a Biom Research Bldg - Directo		Centre	& workshop to	be located in new AHFMR	EQP	\$	378,800	AHFMR
	General research grant to the Dean for the support of research				rch in the Faculty of Medicine	OPR	\$	50,000	MRC
	Type of Award	No.		Amount	Source of Funds	No.		Amount	
i	Equipment	1	\$	378,800	AHFMR	1	\$	378,800	
	Equipment Operating	1	\$ \$	378,800 50,000	AHFMR MRC	1 1	\$ \$	378,800 50,000	

Department of Anaesthesia

Investigator	Project Title		Award	 Amount	Agency
Finegan, B A Pharmacokinetic	s of Diltiazem in patients undergoing coronary arte	ry bypass grafting	OPR	\$ 15,750	NORD
Operating	Ot	her Agencies	1	\$ 15,750	

estigator estigator	Project Title			Award		Amount	Agency
agnall, K M Tissue morphogenesis and pathways for cell migration as evidenced by somatic involvement in vertebral development				OPR	\$	4,320	NSERC
ampenot, R B Control of nerve fiber growth and survival by ions, pharmacological agents, and electrical activity				OPR	\$	180,000	AHFMR
ukoff, T L Neuropeptides and cardiovascular regulation ller, F D				OPR	\$	42,735	MRC
Molecular analysis of neuronal development ilos, N C				OPR	\$	146,598	AHFMF
Intrinsic cellular factors a phy, R A	and their roles in pa	attern formation b	by neural crest cells	OPR	\$	44,802	MRC
Nerve growth factor:ana	lysis in iris			OPR	\$	80,000	AHFMR
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	6 \$	498,455	AHFMR	3	\$	406,598	
			MRC NSERC	2	\$ \$	87,537 4,320	
			Total	1 6	\$	498,455	
partment of Applied							
estigator ngartner, T N	Project Title			Award		Amount	Agency
Co-investigator with wei	ir, B (Surgery and 0	Clinical Surgery):	Studies on the prevention of				
chronic Co-investigator with Ove erton, T R	erton, T R: Treatme	nt of osteoporos	·	000	Φ.	450.000	DDO
chronic Co-investigator with Ove erton, T R Skeletal status study in a	erton, T R: Treatme	nt of osteoporos	is with	OPR	\$	150,000	DBC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutri Co-investigator with Wei	erton, T R: Treatme an elderly populatio tional survey of a g	nt of osteoporos on roup of elderly p	is with	OPR OPR	\$ \$	150,000 17,550	DBC KSC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrico-investigator with Weichronic Treatment of osteoporos Funded previously under postmenopausal women reder, R E	erton, T R: Treatme an elderly population tional survey of a g ir, B (Surgery and G sis with sodium fluo r the title 'A clinical	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a	eople in Edmonton Studies on the prevention of alone - a comparative study.		-	•	_
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutri Co-investigator with Wei chronic Treatment of osteoporos Funded previously unde postmenopausal women rder, R E Co-investigator with Alle	erton, T R: Treatme an elderly populational tional survey of a g ir, B (Surgery and G sis with sodium fluor r the title 'A clinical '	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy	OPR OPR	\$	17,550 52,867	KSC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrico-investigator with Weichronic Treatment of osteoporos Funded previously under postmenopausal women rider, R E Co-investigator with Alle The study of axonal transpersor.	erton, T R: Treatme an elderly populational tional survey of a g ir, B (Surgery and G sis with sodium fluor r the title 'A clinical '	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy	OPR	\$	17,550	KSC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutric Co-investigator with Weichronic Treatment of osteoporos Funded previously unde postmenopausal women der, R E Co-investigator with Alle The study of axonal tran	erton, T R: Treatment an elderly population tional survey of a gir, B (Surgery and Cosis with sodium fluor the title 'A clinical ' n, P S (Group NMI sport using a multing the No.	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy counter Source of Funds	OPR OPR	\$	17,550 52,867 39,909 <i>Amount</i>	KSC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrico-investigator with Weichronic Treatment of osteoporos Funded previously under postmenopausal women rider, R E Co-investigator with Alle The study of axonal transpersor.	erton, T R: Treatments an elderly population it in a grown of a gr	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional o	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR OPR No.	\$ \$	17,550 52,867 39,909 Amount 92,776	KSC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutric Co-investigator with Weichronic Treatment of osteoporos Funded previously unde postmenopausal women of the co-investigator with Alle The study of axonal tran	erton, T R: Treatment an elderly population tional survey of a gir, B (Surgery and Cosis with sodium fluor the title 'A clinical ' n, P S (Group NMI sport using a multing the No.	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy counter Source of Funds	OPR OPR OPR	\$	17,550 52,867 39,909 <i>Amount</i>	KSC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutring Co-investigator with Weichronic Treatment of osteoporos Funded previously under postmenopausal women of the co-investigator with Alle The study of axonal trantal trantal Type of Award Operating	erton, T R: Treatment an elderly populational survey of a gir, B (Surgery and Costs with sodium fluor the title 'A clinical' n, P S (Group NMI sport using a multipus) No. 4 \$	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR OPR No.	\$ \$	17,550 52,867 39,909 Amount 92,776 167,550	KSC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrice Co-investigator with Weichronic Treatment of osteoporos Funded previously unde postmenopausal women of R E Co-investigator with Alle The study of axonal tranter Type of Award Operating partment of Biochem	erton, T R: Treatment an elderly populational survey of a gir, B (Surgery and Costs with sodium fluor the title 'A clinical' n, P S (Group NMI sport using a multipus) No. 4 \$	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR OPR No.	\$ \$	17,550 52,867 39,909 Amount 92,776 167,550	KSC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrir Co-investigator with Weichronic Treatment of osteoporos Funded previously unde postmenopausal women of the study of axonal tran Type of Award Operating partment of Biochem estigator derson, W F Co-investigator with Kay	erton, T R: Treatment an elderly populational survey of a good ir, B (Surgery and Costs with sodium fluor the title 'A clinical the	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy counter Source of Funds MRC Other Agencies Total	OPR OPR No. 2 2 4	\$ \$	17,550 52,867 39,909 Amount 92,776 167,550 260,326	MRC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrir Co-investigator with Weichronic Treatment of osteoporos Funded previously unde postmenopausal womender, R E Co-investigator with Alle The study of axonal tran Type of Award Operating partment of Biochemestigator estigator lerson, W F Co-investigator with Kayackley, R C Molecular analysis of hu	erton, T R: Treatment an elderly population tional survey of a grir, B (Surgery and Costs with sodium fluor the title 'A clinical 'an, P S (Group NMF sport using a multiple No. 4 \$ Instry Project Title The company of the title of the t	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR No. 2 2 4	\$ \$	17,550 52,867 39,909 Amount 92,776 167,550 260,326	MRC MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutring Co-investigator with Weichronic Treatment of osteoporose Funded previously under postmenopausal women reder, R E Co-investigator with Alle The study of axonal transtanger of Award Operating partment of Biochem estigator derson, W F Co-investigator with Kayackley, R C Molecular analysis of hu Co-investigator with Pae	erton, T R: Treatment an elderly population tional survey of a gir, B (Surgery and Costs with sodium fluor the title 'A clinical') n, P S (Group NMI sport using a multing No. 4 \$ Instry	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR No. 2 2 4 Award OPR	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	17,550 52,867 39,909 Amount 92,776 167,550 260,326 Amount	MRC Agency MRC
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrir Co-investigator with Weichronic Treatment of osteoporos Funded previously unde postmenopausal women rder, R E Co-investigator with Alle The study of axonal tran Type of Award Operating partment of Biochem estigator derson, W F Co-investigator with Kayackley, R C Molecular analysis of hu	erton, T R: Treatment an elderly population tional survey of a gir, B (Surgery and Costs with sodium fluor the title 'A clinical 'an, P S (Group NMI sport using a multing No. 4 \$ Instry Project Title T, C M: Group in proman cytotoxic T centerly the structurery of the project and cytotoxic T centerly the structurery of the structur	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR No. 2 2 4 Award	\$ \$ \$ \$	17,550 52,867 39,909 Amount 92,776 167,550 260,326 Amount 30,000 86,334	MRC Agency MRC NCI
chronic Co-investigator with Overton, T R Skeletal status study in a Dental, dietary and nutrice chronic Treatment of osteoporos Funded previously under postmenopausal women yder, R E Co-investigator with Alle The study of axonal transtand Type of Award Operating partment of Biochem estigator derson, W F Co-investigator with Kay ackley, R C Molecular analysis of hu Co-investigator with Pae T lymphocyte activation Cloning of lymphocyte todger, W A	erton, T R: Treatment an elderly population tional survey of a gir, B (Surgery and Costs with sodium fluor the title 'A clinical 'an, P S (Group NMF sport using a multiple No. 4 \$ Instry Project Title T, C M: Group in proman cytotoxic T central cytotoxic T central cytosing a molecular study oxin genes	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR No. 2 2 4 Award OPR OPR CTR	\$ \$ \$ \$ \$ \$ \$ \$	17,550 52,867 39,909 Amount 92,776 167,550 260,326 Amount 30,000 86,334 110,500	MRC Agency MRC NCI SERAG
chronic Co-investigator with Over erton, T R Skeletal status study in a Dental, dietary and nutrice chronic Treatment of osteoporos Funded previously under postmenopausal women yder, R E Co-investigator with Alle The study of axonal transtand Type of Award Operating Partment of Biochem estigator derson, W F Co-investigator with Kay eackley, R C Molecular analysis of hu Co-investigator with Pae T lymphocyte activation	erton, T R: Treatment an elderly population tional survey of a gir, B (Surgery and Cosis with sodium fluor the title 'A clinical 'a' n, P S (Group NMI sport using a multing No. 4 \$ Instry Instry	ent of osteoporos on roup of elderly p Clinical Surgery): ride and calcium trial of skeletal a R): In vivo applica ple proportional of Amount 260,326	eople in Edmonton Studies on the prevention of alone - a comparative study. ctivation in healthy ations of NMR spectroscopy	OPR OPR No. 2 2 4 Award OPR OPR	\$ \$ \$ \$ \$ \$ \$ \$	17,550 52,867 39,909 Amount 92,776 167,550 260,326 Amount 30,000 86,334	MRC Agency MRC

Investigator Project Title	Award		Amount	Agency
Brox, L W				
Co-investigator with Henderson, J F (J S McEachern Laboratory): Strategies for improving combination				
Co-investigator with Henderson, J F (J S McEachern Laboratory): Effects of guanine nucleotides				
Cass, C E Co-investigator with Brox, L W (J S McEachern Laboratory): Operation of flow cytometry laboratory				
Co-investigator with Paterson, A R P (J S McEachern Laboratory): Transport of nucleosides				
Henderson, J F Co-investigator with Brox, L W (J S McEachern Laboratory): Operation of flow cytometry laboratory				
Hodges, R S				
Hewlett Packard HP 1090 HPLC machine with accessories	EQP	\$	67,551	AHFMR
LKB 4170 Biolynx peptide synthesizer with computer control	EQP	\$	139,300	AHFMR
Regulation of cardiac muscle contraction	OPR	\$	35,360	CHF
Maintenance and equipment grant for Alberta Peptide Institute Co-investigator with Kay, C M: Group in protein structure and James, M N G	OPR	\$	57,000	MRC
To generate information relevant to the design of inhibitors of human renin	CTR	\$	267,337	CALBI
Refinement of the crystal structure of porcine pepsin	CTR	\$	9,750	CANG
Research	OPR	\$	15,840	MILES
Co-investigator with Kay, C M: Group in protein structure and				
Kaplan, J G	ODD	ው	70.400	MDC
Biochemical and cytochemical analysis of nuclear activation in stimulated lymphocytes	OPR OPR	\$	72,498	MRC NSERC
Mechanism of the proliferative activation of lymphocytes Kay, C M	OPR	\$	53,472	NSERC
Physico-chemical, chemical and biological studies on cardiac troponin C and troponin T	OPR	\$	31,200	CHF
Group in protein structure and function	OPR	\$	1,554,112	MRC
Madsen, N B Automated chromatography system I A from Pharmacia, consisting of their System I minus the fraction collector (Frac 100)	EQP	\$	14,834	AHFMR
Structure-function relationships and regulation of enzymes associated with glycogen metabolism	OPR	\$	151,500	MRC
McElhaney, R N				
Co-investigator with Poznansky, M J (Physiology): Electron paramagnetic resonance				
The roles of lipids in biomembrane structure and function	OPR	\$	109,201	MRC
McFadden, G Replication and resolution of cloned poxivirus telomeres	OPR	\$	49,490	MRC
Shope fibroma virus	OPR	\$	101,942	NCI
Morgan, A R	0, ,,	Ψ	101,012	,,,,,
DNA replication, recombination, repair	OPR	\$	62,115	MRC
Paetkau, V H Structure and expression of genome DNA	OPR	\$	80,800	MRC
Modulators of lymphocyte function	OPR	\$	92,852	NCI
Paranchych, W	0111	Ψ	32,032	1101
Beckman model L8-70M preparative ultracentrifuge and type VTi80 rotor	EQP	\$	45,495	AHFMR
Characterization of conserved and variable peptide domains on the surface of pseudomonas pili: Potential for therapeutic strategies in patients with cystic fibrosis	OPR	\$	20,948	CCFF
Biosynthesis, assembly, structure and function of bacterial pili	OPR	\$	128,723	MRC
Paterson, M C Molecular cloning of human DNA repair genes Reithmeier, R A	OPR	\$	75,000	MRC
Structure and function of the anion transport protein of human erythrocyte membranes	OPR	\$	12,750	MRC
Schneider, W J				
Hormonal control of VLDL metabolism	OPR	\$	41,600	CHF
Receptor-mediated endocytosis in oocytes Scraba, D G	OPR	\$	59,618	MRC
Service contract for Philips EM 420-STEM electron microscope	OPR	\$	11,100	MRC
(1) Studies of mammalian viruses (2) Biological electron microscopy	OPR	\$	77,770	MRC
Smillie, L B			•	
Amino acid analyzer facility	EQP	\$	127,699	AHFMR
Co-investigator with Kay, C M: Group in protein structure and				

Investigator	Project	Title			Award		Amount	Agency
Sykes, B D								
	vith Kay, C M: Group in	n pro	otein structure an	d				
and Molecular Pl		erimo	ental Therapeutic	between the Department of Cell cs at the Medical University of perta	OPR	\$	16,000	MUSC
Supercomputers	Access, awarded 10 h	our	s		OPR			NSERC
Vance, D E								
	vith Poznansky, M J (F	hys	iology): Electron	paramagnetic resonance				
Weiner, J H			alata Da K. Alla	M 0.0/07	050	Φ.	45.000	ALIEND
	port and regulation, to			•	CFC	\$	15,000	AHFMR
Co-investigator v	vith Poznansky, M J (F	hys	iology): Electron	paramagnetic resonance				
An investigation	of membrane transpor	t pro	ocesses		OPR	\$	88,173	MRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	15,000	AHFMR	7	\$	438,379	
Contracts	3	\$	387,587	MRC	17	\$	2,730,950	
Equipment	6	\$	423,379	NSERC	1	\$	53,472	
Operating	27	\$	3,226,498	Other Agencies	12	\$	829,663	
Total	37	\$	4,052,464	Total	37	\$	4,052,464	

Cross Cancer Institute

The Cross Cancer Institute is an independent organization and has a formal affliation with the Faculty of Medicine. The Alberta Cancer Board administers research funds for the Cross Cancer Institute directly. All principal investigators at the Cross Cancer Institute also hold academic appointments with the University of Alberta. Operating awards administered directly by the Institute include: ACB \$2,005,790; NCI \$427,016; AHMFR \$550,425; MRC \$90,150; private contracts and other institutions \$1,484,688; total \$4,558,069. This total is not included in the University of Alberta total given at the beginning of this document. Research support is reported within the University's departments when awards are administered by the University.

nvestigator	Project Title			Award		Amount	Agency
	l & lipoprotein metabo	ism		OPR	\$	376,000	AHFMR
ance, D E	up- Phospholipid and I	inoprotein metal	polism	OPR	\$	160,000	AHFMR
·	aticylcholine biosynthe			OPR	\$	144.228	MRC
ance, J Ĕ	,				•	, -	
The role of phospholip	oids in lipoproteins			OPR	\$	47,000	CHF
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Operating	4 \$	727,228	AHFMR	2	\$	536,000	
			MRC	1	\$	144,228	
			Other Agencies Total	1 4	\$ \$	47,000 727,228	
nvestigator	Project Title			Award		Amount	Agency
<u></u>	Project Title			Award		Amount	Agency
Illen, P S		metabolism in	tumour and peritumour tissue	Award OPR	\$	<i>Amount</i> 43,000	Agency ACB
Allen, P S In vivo applications of					\$ \$		
Illen, P S In vivo applications of In vivo applications of	f NMR spectroscopy to f NMR spectroscopy a	nd imaging to m		OPR		43,000	ACB
Illen, P S In vivo applications of In vivo applications of Co-investigator with N fluid	f NMR spectroscopy to f NMR spectroscopy a Man, S F P (Medicine a	nd imaging to m and Clinical Med	edicine	OPR		43,000	ACB
Illen, P S In vivo applications of In vivo applications of Co-investigator with Influid Co-investigator with Vichronic	f NMR spectroscopy to f NMR spectroscopy a Man, S F P (Medicine a	nd imaging to m and Clinical Med clinical Surgery):	edicine icine): NMR in study of alveolar Studies on the prevention of	OPR		43,000	ACB
Illen, P S In vivo applications of In vivo applications of Co-investigator with Influid Co-investigator with Vichronic	f NMR spectroscopy to f NMR spectroscopy a Man, S F P (Medicine a Veir, B (Surgery and C	nd imaging to m and Clinical Med clinical Surgery):	edicine icine): NMR in study of alveolar Studies on the prevention of	OPR OPR	\$	43,000 239,500	ACB ACB
Illen, P S In vivo applications of In vivo applications of Co-investigator with M fluid Co-investigator with W chronic In vivo applications of	f NMR spectroscopy to f NMR spectroscopy a Man, S F P (Medicine a Veir, B (Surgery and C f nuclear magnetic res	nd imaging to mand Clinical Medilinical Surgery): onance to medic	edicine icine): NMR in study of alveolar Studies on the prevention of cine Source of Funds MRC	OPR OPR OPR	\$	43,000 239,500 71,224 <i>Amount</i> 71,224	ACB ACB
Illen, P S In vivo applications of In vivo applications of Co-investigator with M fluid Co-investigator with W chronic In vivo applications of Type of Award	f NMR spectroscopy to f NMR spectroscopy a Man, S F P (Medicine a Neir, B (Surgery and C f nuclear magnetic res No.	nd imaging to mand Clinical Medilinical Surgery): conance to medical Amount	edicine icine): NMR in study of alveolar Studies on the prevention of cine Source of Funds	OPR OPR	\$	43,000 239,500 71,224 <i>Amount</i>	ACB ACB

nvestigator	Project Title			Award		Amount	Agenc
ay, K S	10/11		Ph f				
Co-investigator with Kouldotti, T L	err, J C (Nursing): As	sessment of qua	uity of nursing				
Symposium on immun	otoxicology			CFC	\$	14,900	ACOH
Illness experience of fi	refighters			OPR	\$	47,700	ACOH
Pesticide poisoning ma	anual			CTR	\$	15,000	ΑE
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	14,900	Other Provincial	3	\$	77,600	
Contracts	1 \$	15,000			•	7.,000	
Operating	1 \$	47,700					
Total	3 \$	77,600					
epartment of Immune	ologv						
estigator/	Project Title			Award		Amount	Agenc
ener, E							
from lymphoma-bone	marrow cell mixtures		ted purging of lymphoma cells	CTR	\$	75,140	BIOM
Use of target cell-spec autoimmune disease	ific drug-immunoconj	jugates in immur	notherapy of cancer and	OPR	\$	81,750	MRC
MRC Group on Immur	noregulation			OPR	\$	156,563	MRC
Analysis of the homeo	static control of hema	atopoietic stem c	ells	OPR	\$	65,000	SRC
tedar, A		•					
Co-investigator with G	reen, DR: T-cell resp	oonses to collage	en type				
T cell recognition				OPR	\$	63,681	MRC
Co-investigator with W	legmann, T G: Materi	nal immunoregu	altion and fetal				
een, D R T-cell responses to co	llagen type II in mice			OPR	\$	43,605	AS
Immune response in ir		e formation and	cancie	OPR	Ψ \$	40,000	CFIC
Antigen-specific suppr			sepsis	OPR	\$	57,763	MRC
Inhibitory t-cell lympho			ianov	OPR	\$	37,700	MRC
T-Cell separation tech		ma immunodend	ile i icy	OPR	\$	15,000	SCICA
ilbert, L J	riiques			Orit	Ψ	13,000	30107
	rox, L W (J S McEacl	hern Laboratory)	: Operation of flow cytometry				
Regulation of macroph	nage production			OPR	\$	70,560	NCI
e, K C					_		
Functions of dendritic			duction	OPR	\$	63,122	NCI
The specificity of tumo	or recognition by mac	rophages		OPR	\$	51,750	NCI
ongenecker, B M Molecular markers of i	malianancy and differ	rentiation		OPR	\$	51,000	MRC
Mechanisms of organ	_		I Initiatives Program	OPR	\$	14,440	NCI
_	•	•	against carbohydrate cancer	OPR	\$	62,000	NCI
antigens	inesion receptors and	a r-cen minumit	agamst carbonydrate cancer	Orit	Ψ	02,000	1401
larski, L M							
Co-investigator with B laboratory	rox, L W (J S McEacl	hern Laboratory)	: Operation of flow cytometry				
Analysis of help in cyt	otoxic T Cell respons	es ,		OPR	\$	88,575	MRC
Analysis of immunode	ficiency in multiple m	yeloma		OPR	\$	64,995	NCI
	- in man -b (°)	tie (NOD)		000	Φ.	40.000	CD 4
	s in non-obese diabet			OPR	\$	43,000	CDA
Modulation of diabetes	talala a a a tala a di		cytes	OPR	\$	30,000	MRC
Modulation of diabetes Molecular basis of per	_		•	000	•	00 550	
Modulation of diabetes Molecular basis of per Characterization of fur	nctional sites on MHC	antigens		OPR	\$	68,558	MRC
Modulation of diabetes Molecular basis of per Characterization of fur Co-investigator with D	nctional sites on MHC	antigens		OPR	\$	68,558	MRC
Modulation of diabetes Molecular basis of per Characterization of fur Co-investigator with D egmann, T G	nctional sites on MHC liener, E: MRC Group	antigens on Immunoregu			·		
Molecular basis of per Characterization of fur Co-investigator with D legmann, T G Antibody facilitation of	nctional sites on MHC liener, E: MRC Group bone marrow engraf	Cantigens o on Immunoreguitment		OPR	\$	72,750	MRC
Modulation of diabetes Molecular basis of per Characterization of fur Co-investigator with D regmann, T G	nctional sites on MHC liener, E: MRC Group bone marrow engraf altion and fetal surviv	antigens on Immunoregu tment val	ulation		·		

	Type of Award	740.		Amount	Source of Fullus	NO.		AIIIOUIIL	
	Contracts	1	\$	75,140	MRC	11	\$	771,890	
	Operating	23	\$	1,318,348	Other Agencies	13	\$	621,598	
	Total	24	\$	1,393,488	Total	24	\$	1,393,488	
.IS.N	McEachern Laboratory								
			T'M -						
Invest		Project	iitie			Award		Amount	Agency
Brox,						000	•	07.000	400
	Operation of flow cytometry I		^ .			OPR	\$	87,600	ACB
Cass,	Co-investigator with Paterson	п, А Н Р: (Jenti	rai research supp	ort services				
Oass,	Co-investigator with Paterson	n. A R P: (Cent	ral research supp	ort services				
	_				s in chemotherapy of neoplastic	OPR	\$	100,000	ACB
	disease	5 m mama		is. Now strategies	s in one motherapy of neoplastic	0111	Ψ	100,000	AOD
Craik,									
	Co-investigator with Cass, C	E: Nucleo	side	transport system	ıs in				
Gati, \		-							
Hand	Co-investigator with Cass, C	E: Nucleo	side	transport system	ıs in				
nende	erson, J F Co-investigator with Paterson	n A P P · /	`anti	ral recearch cure	ort services				
	Strategies for improving com					ODD	φ	E0 000	ACD
						OPR	\$	50,000	ACB
	Purine nucleoside and nucle				reviously awarded under title	OPR	\$	37,281	MRC
Paters	son, A R P	Olide mela	ibons	oi i i					
	Central research support ser	vices in th	е Ма	Eachern Laborat	orv	OPR	\$	50,000	ACB
	Co-investigator with Cass, C				-		•	00,000	
	Transport of nucleosides		0.00	inanoport dyotom		OPR	\$	89,627	MRC
	Studies in cancer chemother	anv				OPR	\$	675,925	NCI
	Studies in Cancer Chemother	ару				OFR	Ψ	073,923	NOI
	Type of Award	No.		Amount	Source of Funds	No.		Amount	
	Operating	7	\$	1,090,433	MRC	2	\$	126,908	
					Other Provincial	4	\$	287,600	
					Other Agencies	1	\$	675,925	
					Total	7	\$	1,090,433	
Dans	artment of Medical Mic	robiolo	71/ C	nd Infaction	e Disoasos				
-				ina intectious	S Diseases				
Invest	igator	Project	Title			Award		Amount	Agency
Arms	trong, G D								
		of intestir	nal e	pithelial cell recep	otors for human enterotoxigenic	OPR	\$	9,000	MRC
Conni	Escherichia coli								
Fanni	Co-investigator with Tyrrell, I	DI 1 Roy	co I	II T 2196D 95 da	aroo C				
Leund	g, W C	D L. I Mev		LI 2100D -03 de	gree C,				
	Factors influencing the produ	uction of b	iopro	ducts from recon	nbinant filamentous fungi	OPR	\$	72,000	NSERC
Marus	syk, R G				g.	• • • • • • • • • • • • • • • • • • • •	•	1 _,5 5 5	
	VIIth International Congress	on Virolog	y, to	be held in Edmo	nton, Alberta, Aug 9-14/87	CFC	\$	60,000	AHFMR
	Co-investigator with Tyrrell, I								
	VIIth International Congress	on Virolog	ıy, to	be held in Edmo	nton, Alberta, Aug 9-14/87	CFC	\$	5,000	HWC
	Immunity elicited by measles				•	OPR	\$	31,720	MSI
Robei	rtson, J A						*		-
	Characterization of Ureaplas	ma urealy	ticur	n		OPR	\$	50,944	MRC
Roma	inowski, B	4.							
	Connedian callaborative study								
	active women	y of humar	ı imr	nunodeficiency vi	rus infection among sexually	OPR	\$	42,955	HWC

Source of Funds

No.

Amount

Type of Award

No.

Amount

Investig	ator	Project	Title	1		Award		Amount	Agency
Salmi, A	A A								
	Immunopathogenesis of ne	urovirologic	al dis	eases		OPR	\$	80,000	AHFMR
	(Reichert) histostat 975C cr	•				EQP	\$	10,960	AHFMR
	Co-investigator with Tyrrell,				-				
	(Baker) BioGard B40-112 v			_	=	EQP	\$	10,813	AHFMR
	Co-investigator with Taylor,								
	Co-investigator with Marusy Virus infection and immunit		nunity	y elicited by me	asies vaccination	OPR	\$	E1 201	MSS
Taylor,		y III EAE				OFR	Φ	51,301	IVIOO
	Characterization of bacteria	ıl plasmids				EQP	\$	15,340	AHFMR
	Genetic and physical chara	cterization	of ant	ibiotic resistanc	e plasmids of the H	OPR	\$	50,139	MRC
Tyrrell,	ncompatibility group								
		gree C, 20	foot c	ubic foot uprigh	t freezer, and filing system	EQP	\$	11,844	AHFMR
	Antiviral therapy for hepatiti	-		, ,		TTR	\$	75,000	AHFMR
(Co-investigator with Taylor,	D E: Chara	acteriz	zation of bacteri	al plasmids				
	Co-investigator with Salmi,				-				
	Paramyxoviruses: Assembl	y, persister	ice ar	nd autoimmunity	1	OPR	\$	76,035	MRC
Г	Neurovirological research					OPR	\$	31,269	PENN
7	Type of Award	No.		Amount	Source of Funds	No.		Amount	
-	Conferences	2	\$	65,000	AHFMR	7	\$	263,957	
	Equipment	4	\$	48,957	MRC	4	\$	186,118	
	Operating	10	\$	495,363	NSERC	1	\$	72,000	
	Technology Transfer Total	1 17	\$ \$	75,000 684,320	Other Federal Other Agencies	2	\$ \$	47,955 114,290	
					Other Agendies		Ψ	117,200	
Depar	tment of Medicine a	nd Clinic	al M		Total	17	\$	684,320	
Depar Investig	tment of Medicine a		al M			17 Award	\$	684,320 Amount	Agency
Depar Investig Bretsch	tment of Medicine an ator ner, P A	nd Clinic Project	al M	ledicine	Total	Award		Amount	
Depar Investig Bretsch	tment of Medicine and attention and attention and induction of lymphocyte and induction of lymphocyte.	nd Clinic Project and modula	al M	ledicine			\$,	Agency MRC
Depar Investig Bretsch	tment of Medicine and attor ner, P A Antigen-specific regulation and induction of lymphocyte W R	nd Clinic Project and modula	eal M Title	ledicine of the immune re	Total esponse. Previous title: Paralysis	Award		Amount	
Depar Investig Bretsch	tment of Medicine and stator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli,	nd Clinic Project and modula	eal M Title	ledicine of the immune re	Total esponse. Previous title: Paralysis	Award		Amount	
Depar Investig Bretsch Castor,	tment of Medicine and ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography	nd Clinic Project and modula es T M (Scien	tion conce, Pe	ledicine of the immune re	Total esponse. Previous title: Paralysis nputer assisted	Award OPR	\$	Amount 63,050	MRC
Depar Investig Bretsch Castor, Clandin	tment of Medicine and ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography nin, M T Phospholipid turnover and in	nd Clinic Project and modulates T M (Scient	tion o	ledicine of the immune resychology): Coresis in the intes	Total esponse. Previous title: Paralysis	Award		Amount	
Depar Investig Bretsch Castor, Clandin	tment of Medicine at ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography nin, M T Phospholipid turnover and regulation of lipid absorption	nd Clinic Project and modulates T M (Scient	tion o	ledicine of the immune resychology): Coresis in the intes	Total esponse. Previous title: Paralysis nputer assisted	Award OPR	\$	Amount 63,050	MRC
Depar Investig Bretsch Castor, Clandin Dasgup	tment of Medicine at ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography nin, M T Phospholipid turnover and regulation of lipid absorption ta, M K Co-investigator with Dosset	nd Clinic Project and modulates T M (Scient membrane in normal	Title ation coce, Pe	ledicine of the immune resychology): Conesis in the intestisease states	esponse. Previous title: Paralysis nputer assisted tinal mucosa: Implications for	Award OPR	\$	Amount 63,050	MRC
Depar Investig Bretsch Castor, Clandin Dasgup Davies,	tment of Medicine al ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography nin, M T Phospholipid turnover and a regulation of lipid absorption ta, M K Co-investigator with Dosset P	nd Clinic Project and modulates T M (Scient membrane in normal tor, J B: Con	eal M Title ation of ce, Ps synthe and of	ledicine of the immune resychology): Cor- esis in the intestisease states tive research an	esponse. Previous title: Paralysis nputer assisted tinal mucosa: Implications for	Award OPR OPR	\$	Amount 63,050 38,889	MRC
Depar Investig Bretsch Castor, Clandin Dasgup Davies,	tment of Medicine al ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography nin, M T Phospholipid turnover and a regulation of lipid absorption ta, M K Co-investigator with Dosset P	and modulates T M (Scient membrane in normal tor, J B: Coto abnormali	eal Marticle ation of the control o	ledicine of the immune resychology): Conesis in the intestisease states tive research and neutrophil func	esponse. Previous title: Paralysis nputer assisted tinal mucosa: Implications for	Award OPR	\$	Amount 63,050	MRC
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Depar Investig Bretsch Castor, Clandin Dasgup Davies, Fedoral Field, C Ginsbe	tment of Medicine and ator ner, P A Antigen-specific regulation and induction of lymphocyte W R Co-investigator with Caelli, mammography nin, M T Phospholipid turnover and regulation of lipid absorption ta, M K Co-investigator with Dosset P A study of factors leading to with rheumatoid arthritis and or, J B Cooperative research and operitoneal dialysis system to peritoneal dialysis system to peritoneal dialysis system to be provided by the control of the	and Clinic Project and modula as T M (Scien membrane in normal tor, J B: Co abnormali d Felty's Sy developmer hat resist be nitestinal gle nin, M T (He msulin resis	ce, Ps synthe and co opera ties in redror acteria ucose ome E	ledicine of the immune respective research and neutrophil functions of the immune respective research and neutrophil functions of the immune respective research and neutrophil functions of transport	esponse. Previous title: Paralysis inputer assisted tinal mucosa: Implications for ind development etion and numbers in patients int of urine collection and and reduce catheter-associated ids and Nutrition): Modulation of	Award OPR OPR OPR	\$ \$ \$	Amount 63,050 38,889 17,575 14,000	MRC MRC MSI NSERC
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Investigator	Project Title	Award		Amount	Agency
Halloran, P F					
	clinical molecular immunology	OPR	\$	285,000	AHFMR
•	ds the cost of relocating Dr. Halloran's laboratory equipment and personnel	INF	\$	12,000	AHFMR
	nd alloimmune responses of the mouse	OPR	\$	70,000	MRC
Harley, C H	r with Overton, T R (Applied Sciences in Medicine): Treatment of osteoporosis				
with	if with Overton, 1 11 (Applied Sciences in Medicine). Treatment of osteoporosis				
Hulbert, W C					
LKB historang		EQP	\$	24,570	AHFMR
	cellular exfoliation and reforming of barrier properties	OPR	\$	24,000	ALA
Humen, D P	A model with acute and chronic airway hyperreactivity	OPR	\$	22,192	USNIH
	I antibody in catheter shock	OPR	\$	10,650	CHF
Jimbow, K			_		
Laboratory dia Jugdutt, B I	ignosis & rational therapy of melanoma	OPR	\$	379,532	AHFMR
	f ventricular geometry and function after myocardial infarction	OPR	\$	18,720	CHF
	t disease: Preservation of ischemic myocardium/healing after myocardial	OPR	\$	53,808	MRC
infarction	, ,			•	
Kappagoda, C T	offeets of stimulating rapidly adopting recentars	OPR	\$	14 750	ALA
· -	effects of stimulating rapidly adapting receptors Ir reflexes and pulmonary blood flow - previously entitled function of atrial	OPR	\$ \$	14,750 38,706	MRC
receptors	in reliexes and pulmonary blood flow - previously entitled function of athai	Orn	Ψ	30,700	IVII 1O
•	or with Mant, M J: Platelet activation/reactivity				
Kaufman, S		0.00	_	.=	0.15
	release and actions of ANP	OPR	\$	47,500	CHF
Mechanisms t	by which atrial stretch contributes to fluid and electrolyte homeostasis	OPR	\$	45,066	MRC
Research on a	ageing	OPR	\$	2,175	ASSCH
	ageing, problem behavior	OPR	\$	2,550	ASSCH
King, M		000			0.055
	nce by airflow interaction	OPR	\$	36,700	CCFF
Leung, W C	spiratory tract mucus	OPR	\$	43,597	MRC
J ,	eering of human interferon gamma	OPR	\$	54,825	NCI
Lien, D C		000			
•	airway inflammation	OPR	\$	96,896	AHFMR
MacLean, G	etics in the airway microvasculature	OPR	\$	20,525	ALA
Radioimmuno	scintigraphy using novel monoclonal antibodies (in collaboration with the	OPR			BIOM
	er Board - \$250,450)	000			1400
	scintigraphy using novel monoclonal antibodies (in collaboration with the er Board - \$65,000)	OPR			MRC
Mahachai, V	υ Βοαία - φου,ουσ <i>j</i>				
Factors influe	ncing intestinal & hepatic first-pass metabolism of drugs	OPR	\$	62,500	AHFMR
Man, G C W	Inhur digyide induced trachael constriction	OPR	\$	17,400	MRC
	lphur dioxide induced trachael constriction lex changes in bronchomotor tone during high frequency oscillation	OPR	\$ \$	7,250	MRC
Man, S F P	ion officinges in prononomotor tone during high frequency oscillation	0/11	Ψ	1,200	1411 10
	research fund - to be used in research development	OPR	\$	5,000	ALA
•	of alveolar fluid clearance	OPR	\$	41,500	CHF
	or with Noujaim, A A (Pharmacy and Pharmaceutical Sciences): Aliphatic				
	tential radiopharmaceuticals	ODD	ው	47.000	MBC
Non-ventilator	y lung function in inhalational injury	OPR	\$	47,066	MRC
	ation/reactivity in cardiovascular disease	OPR	\$	43,479	MRC
Moreau, M J	•	055	•		1400
Experimental Morrish, D W	evaluation of spinal fixation devices	OPR	\$	6,000	MRC
	placental growth, differentiation and peptide hormone secretion	OPR	\$	44,440	MRC
Pazderka, F		•	*	,	
	or with Brox, L W (J S McEachern Laboratory): Operation of flow cytometry				
laboratory Preiksaitis, J K					
	and lymphoproliferation in renal allograft recipients	OPR	\$	30,000	KFC
	• • • • • • • • • • • • • • • • • • • •			•	

estigator	Project	Title			Award		Amount	Agency
sell, A S			-					
	F (Pharma	су а	nd Pharmaceution	al Sciences): Stereoselective				
n, È A	معدما مانام				ODD	Φ	17 450	MCI
Insulin action in gestational on w, A R E	uiabetes				OPR	\$	17,456	MSI
Structural and functional cha	aracterisati	on of	a signal-genera	ting cell surface glycoprotein	OPR	\$	30,000	MRC
mson, A B R Co-investigator with Poznani	skv. M J (F	Physi	ology): Electron	paramagnetic resonance				
Intestinal membrane transpo	• ,	-	•••		OPR	\$	42,000	CDA
Critical period programming					OPR	\$	40,000	CFIC
Intestinal absorption in healt hurn, P	th and dise	ase			OPR	\$	77,265	MRC
Regulation of energy balanc	e				OPR	\$	72,500	AHFMR
ner, A R Co-investigator with Brox, L	W (J S Mc	Each	ern Laboratory)	Operation of flow cytometry				
laboratory								
kowski, F X Autonomic neural influences	in arrhyth	moge	enesis		OPR	\$	52,000	CHF
ng, D	·	_			ODB	ø		A1 A
Leukotriene B4 receptors in ng, K	iuriy and n	eutro	ppriiis		OPR	\$	9,200	ALA
				cyclase and binding kinetics of	OPR	\$	45,376	MRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Equipment	1	\$	24,570	AHFMR	9	\$	1,022,998	
Infrastructure	1	\$	12,000	MRC	17	\$	712,132	
Operating Total	45 47	\$ \$	2,221,878 2,258,448	NSERC Other Provincial	1 2	\$ \$	14,000 4,725	
lotai	7/							
		Ψ	2,230,440	Other Agencies	18	\$	504,593	
		•	2,230,440			-		
		•	2,230,446	Other Agencies	18	\$	504,593	
partment of Obstetrics a	-	aec		Other Agencies	18 47	\$	504,593 2,258,448	•
estigator	and Gyn Project	aec		Other Agencies	18	\$	504,593	Agency
	Project	aec Title	ology	Other Agencies	18 47	\$	504,593 2,258,448 <i>Amount</i>	<i>Agency</i>
chell, B F Hormonal functions of huma	Project an fetal med	aec Title	ology nes	Other Agencies Total	18 47 Award	\$ \$	504,593 2,258,448 <i>Amount</i> 39,188	MRC
estigator chell, B F Hormonal functions of huma	Project in fetal med in Obstetri	aec Title mbra	ology nes nd Gynaecology	Other Agencies Total	18 47 <i>Award</i>	\$ \$	504,593 2,258,448 <i>Amount</i>	MRC
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chell, B F Hormonal functions of huma rcos, F A Post Olympic Conference February 29-March 4, 1988, Type of Award Conferences Operating Total partment of Paediatrics estigator an, G Y Co-investigator with Schiff, I by Pharmacological manipulation del, J C Co-investigator with Hodges machine Northern infant nutrition students	Project In fetal mer In Obstetri Edmontor No. 1 1 2 Project D: Mechan on of the n	aec Title mbra ics ai s, Alb \$ \$ Title ism ceona	nes and Gynaecology erta Amount 10,000 39,188 49,188 of bilirubin toxicit stal circulation	Other Agencies Total - Reflection on the 80's, Source of Funds AHFMR MRC Total	Award OPR CFC No. 1 1 2	\$ \$ \$ \$	504,593 2,258,448 Amount 39,188 10,000 Amount 10,000 39,188 49,188 Amount	MRC AHFMR
chell, B F Hormonal functions of huma rcos, F A Post Olympic Conference February 29-March 4, 1988, Type of Award Conferences Operating Total partment of Paediatrics estigator an, G Y Co-investigator with Schiff, I Pharmacological manipulation tiel, J C Co-investigator with Hodges machine Northern infant nutrition stucce, M G	Project In fetal mer In Obstetri Edmontor No. 1 1 2 Project D: Mechan on of the nois, R S (Bioddy	aec Title mbra ics ai n, Alb \$ \$ Title ism c eona	nes and Gynaecology erta Amount 10,000 39,188 49,188 of bilirubin toxicit stal circulation sistry): Hewlett P	Other Agencies Total - Reflection on the 80's, Source of Funds AHFMR MRC Total Y ackard HP 1090 HPLC	Award OPR CFC No. 1 1 2 Award OPR	\$ \$ \$ \$ \$	504,593 2,258,448 Amount 39,188 10,000 Amount 10,000 39,188 49,188 Amount 75,000	MRC AHFMR Agency
chell, B F Hormonal functions of huma rcos, F A Post Olympic Conference February 29-March 4, 1988, Type of Award Conferences Operating Total partment of Paediatrics estigator an, G Y Co-investigator with Schiff, I by Pharmacological manipulation del, J C Co-investigator with Hodges machine Northern infant nutrition students	Project In fetal mer In Obstetri Edmontor No. 1 1 2 Project D: Mechan on of the nois, R S (Bioddy	aec Title mbra ics ai n, Alb \$ \$ Title ism c eona	nes and Gynaecology erta Amount 10,000 39,188 49,188 of bilirubin toxicit stal circulation sistry): Hewlett P	Other Agencies Total - Reflection on the 80's, Source of Funds AHFMR MRC Total Y ackard HP 1090 HPLC	Award OPR CFC No. 1 1 2 Award OPR	\$ \$ \$ \$ \$	504,593 2,258,448 Amount 39,188 10,000 Amount 10,000 39,188 49,188 Amount 75,000	MRC AHFMR Agency
chell, B F Hormonal functions of huma cos, F A Post Olympic Conference February 29-March 4, 1988, Type of Award Conferences Operating Total partment of Paediatrics estigator in, G Y Co-investigator with Schiff, [6, J Y Pharmacological manipulation del, J C Co-investigator with Hodges machine Northern infant nutrition stud ce, M G Co-investigator with Godel, avorski, M A	Project In fetal menting Distriction In Obstetriction In Obstetriction No. In 1 In 2 In Project Distriction On of the notes, R S (Bioday J C: Norther	aec Title mbra ics ai , Alb \$ \$ Title ism c eona chem	nes and Gynaecology erta Amount 10,000 39,188 49,188 of bilirubin toxicit stal circulation sistry): Hewlett P	Other Agencies Total - Reflection on the 80's, Source of Funds AHFMR MRC Total Y ackard HP 1090 HPLC	Award OPR CFC No. 1 1 2 Award OPR	\$ \$ \$ \$ \$	504,593 2,258,448 Amount 39,188 10,000 Amount 10,000 39,188 49,188 Amount 75,000	MRC AHFMR Agency

estigator/	Project Ti	tle			Award		Amount	Agency
e, K								
Co-investigator with Tar serum theophylline	n, Y K (Pharmac	y and	Pharmaceution	cal Sciences): Estimation of				
paschuk, G D Fatty acid metabolism d	uring ischemia in	the c	diabetic rat he	art	OPR	\$	46,177	JDF
Coenzyme A metabolisr	_				OPR	\$	25,800	MRC
ord, C			at a first to the second	•	000	•	40.000	NOEBO
Cognitive and psycholin Social development and	_		i deficits in aut	ısm	OPR OPR	\$ \$	19,000 37,509	NSERC SSHRC
Sex differences in Autis		"			OPR	Ψ \$	22,409	UOL
chalak, M						·		
Ca transport in mature a ey, P M	ınd developing ra	ats			OPR	\$	252,100	AHFMR
Eicosanoids and the per	inatal circulation				OPR	\$	361,458	AHFMR
bst, H F Co-investigator with Hoo machine	lges, R S (Bioch	emisti	ry): Hewlett Pa	ackard HP 1090 HPLC				
Co-investigator with God	del. J C: Northern	n infar	nt nutrition stu	dv				
hiff, D				•				
-		-		paramagnetic resonance	000	σ	00.040	MDC
Mechanism of bilirubin t ady, D W	oxicity in cultured	a neur	rai ceiis		OPR	\$	29,240	MRC
Body composition of pre	mature infants				OPR	\$	36,125	MRC
n Aerde, J Fat utilization in parente	rally fed newborn	n infer	nts measured	with indirect caloricity & with	OPR	\$	42,000	AHFMR
i ai uliizalion iii barente	rany led newbon	II IIIIai	illo illeasureu	with maneet calonetty & with	Orit	Ψ	42,000	ALII IVII I
tracer kinetics of 13								
tracer kinetics of 13 nman, W M	- A- Marada ala			ata ta atta a carda carta A	OTD	•	440.000	MEDIE
tracer kinetics of 13 enman, W M Research studies relatir				phylactic agents against	CTR	\$	140,000	MERIE
tracer kinetics of 13 enman, W M	human beings us	sing m			CTR OPR	\$	140,000 57,069	MERIE MRC
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in	human beings us	sing m			-	·	,	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human	human beings us chlamydial infec <i>No.</i> 1	sing mations	Amount 140,000	oaches	OPR	\$	57,069	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating	human beings us chlamydial infec <i>No.</i> 1 15	sing mations \$ 1.	Amount 140,000 ,244,394	Source of Funds AHFMR MRC	OPR <i>No.</i> 4 5	\$ \$ \$	57,069 Amount 730,558 188,184	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts	human beings us chlamydial infec <i>No.</i> 1 15	sing mations \$ 1.	Amount 140,000	Source of Funds AHFMR MRC NSERC	OPR <i>No.</i> 4 5 1	\$ \$ \$	57,069 Amount 730,558 188,184 19,000	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating	human beings us chlamydial infec <i>No.</i> 1 15	sing mations \$ 1.	Amount 140,000 ,244,394	Source of Funds AHFMR MRC NSERC SSHRC	OPR No. 4 5 1 1	\$ \$ \$ \$	57,069 Amount 730,558 188,184 19,000 37,509	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating	human beings us chlamydial infec <i>No.</i> 1 15	sing mations \$ 1.	Amount 140,000 ,244,394	Source of Funds AHFMR MRC NSERC SSHRC Other Federal	OPR No. 4 5 1 1 1	\$ \$ \$ \$ \$	57,069 Amount 730,558 188,184 19,000 37,509 131,223	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating	human beings us chlamydial infec <i>No.</i> 1 15	sing mations \$ 1.	Amount 140,000 ,244,394	Source of Funds AHFMR MRC NSERC SSHRC	OPR No. 4 5 1 1	\$ \$ \$ \$	57,069 Amount 730,558 188,184 19,000 37,509	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total	human beings us chlamydial infec <i>No.</i> 1 15 16	sing mations \$ 1.	Amount 140,000 ,244,394	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies	OPR No. 4 5 1 1 1 4	\$ \$ \$ \$ \$ \$ \$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920	
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Pathologenesis	human beings us chlamydial infec <i>No.</i> 1 15 16	sing metions \$ 1,	Amount 140,000 ,244,394	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies	OPR No. 4 5 1 1 1 4	\$ \$ \$ \$ \$ \$ \$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920	MRC
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Pathologestigator T, C C Chromosome structure	human beings us chlamydial infective No. 1 15 16	sing mations \$ 1. \$ 1.	Amount 140,000 ,244,394 ,384,394	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies	OPR No. 4 5 1 1 4 16	\$ \$ \$ \$ \$ \$ \$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394	MRC
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Patholog restigator n, C C Chromosome structure University of Calgary Gann, L E Co-investigator with Bro	human beings us chlamydial infection No. 1 15 16 Project Tile	sing matrions \$ 1. \$ 1.	Amount 140,000 ,244,394 ,384,394 nd other eukar	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies Total	OPR No. 4 5 1 1 1 4 16	\$\$\$\$\$\$\$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394 Amount	MRC
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Patholog restigator I, C C Chromosome structure University of Calgary Gann, L E Co-investigator with Bro laboratory Cryoprotection in cells a membrane: Target for fire	Auman beings us chlamydial infection No. 1 15 16 Project To and function in max, L W (J S McE and tissues. Previous chlamydial infection in max, L W (J S McE and tissues. Previous chlamydial infection in max, L W (J S McE and tissues. Previous chlamydial infection in max, L W (J S McE and tissues. Previous chlamydial infection in max is a constant to the constant tissues.	sing mations \$ 1. \$ 1.	Amount 140,000 ,244,394 ,384,394 and other eukar	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies Total	OPR No. 4 5 1 1 1 4 16	\$\$\$\$\$\$\$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394 Amount	MRC
tracer kinetics of 13 enman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Patholog restigator n, C C Chromosome structure University of Calgary Gann, L E Co-investigator with Bro laboratory Cryoprotection in cells a membrane: Target for fr	And function in max, L W (J S McE and tissues. Preventing injury?	sing mations \$ 1. \$ 1. itle man ar acher riously	Amount 140,000 ,244,394 ,384,394 and other eukar rn Laboratory) y awarded unc	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies Total ryotic species-transfer from	OPR No. 4 5 1 1 1 4 16 Award OPR	\$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394 Amount 70,700	Agency MRC
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Patholog restigator T, C C Chromosome structure University of Calgary Gann, L E Co-investigator with Bro laboratory Cryoprotection in cells a membrane: Target for fr lez, K Pathology and pathophy	And function in max, L W (J S McE and tissues. Preventing injury?	sing mations \$ 1. \$ 1. itle man ar acher riously	Amount 140,000 ,244,394 ,384,394 and other eukar rn Laboratory) y awarded unc	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies Total ryotic species-transfer from	OPR No. 4 5 1 1 4 16 Award OPR	\$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394 Amount 70,700	Agency MRC
tracer kinetics of 13 nman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Patholog restigator T, C C Chromosome structure University of Calgary Gann, L E Co-investigator with Bro laboratory Cryoprotection in cells a membrane: Target for fr lez, K Pathology and pathophy	And function in max, L W (J S McE dezing injury?	sing mations \$ 1. \$ 1. itle man ar acher riously	Amount 140,000 ,244,394 ,384,394 and other eukar rn Laboratory) y awarded unc	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies Total ryotic species-transfer from	OPR No. 4 5 1 1 1 4 16 Award OPR	\$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394 Amount 70,700	Agency MRC
tracer kinetics of 13 enman, W M Research studies relatir Chlamydia infections in Pathogenesis of human Type of Award Contracts Operating Total epartment of Patholog restigator Total contracts Operating Total	And function in max, L W (J S McE dezing injury?	sing mations \$ 1. \$ 1. itle man ar acher riously	Amount 140,000 ,244,394 ,384,394 and other eukar rn Laboratory) y awarded unc	Source of Funds AHFMR MRC NSERC SSHRC Other Federal Other Agencies Total ryotic species-transfer from	OPR No. 4 5 1 1 1 4 16 Award OPR OPR	\$	57,069 Amount 730,558 188,184 19,000 37,509 131,223 277,920 1,384,394 Amount 70,700 52,981 144,000	Agency MRC MRC

Department of Pharmacolo	gy
Investigator	P

nvestigator	Project	Title			Award		Amount	Agency
llen, T M								
		-		paramagnetic resonance				
Co-investigator with Cod				l centrifuge,				
Prolongation of plasma	•				CTR	\$	41,250	LTI
Membrane fusion in mod	del membrane	syste	ms		OPR	\$	9,750	MRC
Drug carriers and the me	on <mark>o</mark> nuclear pha	agocy	te system		OPR	\$	79,214	MRC
Marine natural products	with antineopla	astic a	activities		OPR	\$	51,891	NCI
lanachan, A S	•					•	,	
Co-investigator with Cod	k, D A: Model	J2-21	M/E floor mode	l centrifuge,				
Drug interactions with nu	ucleoside trans	port s	systems		OPR	\$	48,000	CHF
ook, D A		•	•				·	
Model J2-21M/E floor m	odel centrifuge	, JA-2	20 rotor, and JA	-14 rotor	EQP	\$	24,155	AHFMR
Blood vessel reactivity a	nd cerebrovas	cular	spasm		OPR	\$	52,000	CHF
Drug receptors and bion	nembranes - hi	stami	ne receptors		OPR	\$	36,036	MRC
Co-investigator with Wei	r, B (Surgery a	ind C	linical Surgery):	Studies on the prevention of				
chronic	, , , , ,		3- 37					
ryden, W F								
Co-investigator with Sm	th, P A: Modul	ation	of ganglionic tra	Insmission				
rank, G B								
Studies on contraction o					OPR	\$	46,783	MRC
An investigation of the p	roperties of op	iate d	rug receptors lo	cated on excitable cell	OPR	\$	34,349	MRC
membranes								
iordon, T	de D. A. Mandal	10.04	 	1				
Co-investigator with Coc				G ,				
Co-investigator with Smi				insmission				
Trophic interactions in th	ie peripheral n	ervou	s system		OPR	\$	28,130	MRC
eiffenstein, R J	مادادات				ODD	Φ.	07.000	40011
	mae				OPR	\$	97,600	ACOH
Neurological action of su					000		40.000	1450
Role of cholinergic input		al fun	ctioning		OPR	\$	10,875	MRC
Role of cholinergic input	in hippocampa	al fun	ctioning			\$		
Role of cholinergic input Smith, P A Modulation of ganglionic	in hippocampa transmission		·		EQP	\$ \$	33,348	AHFMR
Role of cholinergic input	in hippocampa transmission		·	and spinal cord		\$		
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to	in hippocampa transmission ransmission in		eathetic ganglia	·	EQP OPR	\$ \$	33,348 37,572	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award	in hippocampa transmission ransmission in <i>No.</i>	symp	athetic ganglia	Source of Funds	EQP OPR <i>No</i> .	\$ \$ \$	33,348 37,572 <i>Amount</i>	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts	in hippocampa transmission ransmission in <i>No.</i>	symp	eathetic ganglia Amount 41,250	Source of Funds AHFMR	EQP OPR <i>No.</i>	\$ \$ \$	33,348 37,572 <i>Amount</i> 57,503	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment	transmission in No.	symp \$ \$	Amount 41,250 57,503	Source of Funds AHFMR MRC	EQP OPR <i>No.</i> 2 8	\$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating	transmission in No. 1 2 12	symp	Amount 41,250 57,503 532,200	Source of Funds AHFMR MRC Other Provincial	EQP OPR <i>No.</i> 2 8 1	\$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709 97,600	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment	transmission in No.	symp \$ \$	Amount 41,250 57,503	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR No. 2 8 1 4	\$ \$ \$ \$ \$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709 97,600 193,141	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating	transmission in No. 1 2 12	symp	Amount 41,250 57,503 532,200	Source of Funds AHFMR MRC Other Provincial	EQP OPR <i>No.</i> 2 8 1	\$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709 97,600	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating	transmission in No. 1 2 12	symp	Amount 41,250 57,503 532,200	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR No. 2 8 1 4	\$ \$ \$ \$ \$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709 97,600 193,141	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total	transmission in No. 1 2 12 15	symp	Amount 41,250 57,503 532,200	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR No. 2 8 1 4	\$ \$ \$ \$ \$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709 97,600 193,141	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo	transmission in No. 1 2 12 15	\$ \$ \$ \$	Amount 41,250 57,503 532,200	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR No. 2 8 1 4	\$ \$ \$ \$ \$ \$ \$ \$	33,348 37,572 <i>Amount</i> 57,503 282,709 97,600 193,141	AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology	in hippocampa transmission ransmission in No. 1 2 12 15	\$ \$ \$ \$	Amount 41,250 57,503 532,200	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR <i>No.</i> 2 8 1 4 15	\$ \$ \$ \$ \$ \$ \$ \$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953	AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Investigator Benishin, C G	in hippocampa transmission ransmission in No. 1 2 12 15	symp	Amount 41,250 57,503 532,200 630,953	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR No. 2 8 1 4 15	\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953	AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology nivestigator Benishin, C G Presynaptic modulation	in hippocampa transmission ransmission in No. 1 2 12 15	symp	Amount 41,250 57,503 532,200 630,953	Source of Funds AHFMR MRC Other Provincial Other Agencies	EQP OPR <i>No.</i> 2 8 1 4 15	\$ \$ \$ \$ \$ \$ \$ \$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953	AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Newstigator Benishin, C G Presynaptic modulation Bourne, G A	transmission ransmission in No. 1 2 12 15 99 Project of potassium c	\$ \$ \$ \$	Amount 41,250 57,503 532,200 630,953	Source of Funds AHFMR MRC Other Provincial Other Agencies Total	EQP OPR No. 2 8 1 4 15	\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount	AHFMR MRC Agency AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Nestigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of	in hippocampa transmission ransmission in No. 1 2 12 15 Gy Project of potassium confithe calcium a	symp \$ \$ \$ Title hanne	Amount 41,250 57,503 532,200 630,953 els	Source of Funds AHFMR MRC Other Provincial Other Agencies Total	EQP OPR No. 2 8 1 4 15	\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953	AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Dep	in hippocampa transmission ransmission in No. 1 2 12 15 Gy Project of potassium confithe calcium a	symp \$ \$ \$ Title hanne	Amount 41,250 57,503 532,200 630,953 els	Source of Funds AHFMR MRC Other Provincial Other Agencies Total	EQP OPR No. 2 8 1 4 15	\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount	AHFMR MRC Agency AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Dep	transmission ransmission in No. 1 2 12 15 Gy Project of potassium confithe calcium a elease of gona	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 41,250 57,503 532,200 630,953 els	Source of Funds AHFMR MRC Other Provincial Other Agencies Total	EQP OPR No. 2 8 1 4 15 Award OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380	AHFMR MRC Agency AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Enishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic received. Cheeseman, C I Diabetes and intestinal general contracts Diabetes and intestinal general contracts Page 19 10 10 10 10 10 10 10 10 10 10 10 10 10	transmission ransmission in No. 1 2 12 15 Gy Project of potassium color potassium color gona glucose absorp	symp \$ \$ Title hanne and c dotro	Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount	AHFMR MRC Agency AHFMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiology Nestigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic role Cheeseman, C I Diabetes and intestinal of Co-investigator with Tho	transmission ransmission in No. 1 2 12 15 Gy Project of potassium color potassium color gona glucose absorp	symp \$ \$ Title hanne and c dotro	Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins	Source of Funds AHFMR MRC Other Provincial Other Agencies Total	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380	AHFMR MRC Agency AHFMR MRC
Role of cholinergic input Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic recheeseman, C I Diabetes and intestinal of Co-investigator with The transport in	transmission ransmission in No. 1 2 12 15 9y Project of potassium confithe calcium a elease of gona glucose absorpimson, A B R (IIII)	\$\$\$ \$\$ TTitle hanned c dotro	Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380	AHFMR MRC Agency AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Denishin, C G Presynaptic modulation Investigator Penishin, C G Presynaptic modulation Investigator Cheeseman, C I Diabetes and intestinal of Co-investigator with Tho It transport in Co-investigator with Tho	transmission ransmission in No. 1 2 12 15 9y Project of potassium confithe calcium a elease of gona glucose absorpimson, A B R (IIII)	\$\$\$ \$\$ TTitle hanned c dotro	Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380	AHFMR MRC Agency AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Denishin, C G Presynaptic modulation Investigator Penishin, C G Presynaptic modulation Investigator Cheeseman, C I Diabetes and intestinal of Co-investigator with Tho transport in Co-investigator with Tho programming	transmission ransmission in No. 1 2 12 15 99 Project of potassium confithe calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease a el	\$\$\$ \$\$ TTitle hanned c dotro	Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380 35,000	AHEMR MRC Agency AHEMR MRC CDA
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic recessers, C I Diabetes and intestinal of Co-investigator with Thotal Co-investigator with Thotal programming Control of intestinal trans	transmission ransmission in No. 1 2 12 15 99 Project of potassium confithe calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease of gona glucose absorpimson, A B R (Internal Laboratory) and the Calcium a elease a el	\$\$\$ \$\$ TTitle hanned c dotro	Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380	AHFMR MRC Agency AHFMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic received in the second convestigator with Thousand Co-investigator with Thousand Co-i	in hippocampa transmission ransmission in No. 1 2 12 15 Gy Project of potassium confithe calcium a elease of gona glucose absorpomson, A B R (Insport) sport	symp \$ \$ \$ Title hanne and c dotro Medic	eathetic ganglia Amount 41,250 57,503 532,200 630,953 els yelic nucleotide pins cine and Clinical	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane Medicine): Critical period	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380 35,000	AHEMR MRC Agency AHEMR MRC CDA
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Conishin, C G Presynaptic modulation Investigator Condition of the roles of mediating the biphasic receives and intestinal of transport in Co-investigator with The programming Control of intestinal transferench, A S Computing equipment for	in hippocampa transmission ransmission in No. 1 2 12 15 gy Project of potassium confithe calcium and allucose absorphimson, A B R (Insport of processing seconds or processing seconds.	\$\$\$ \$\$ TTitle hannand c dotro Media Media	eathetic ganglia Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins cine and Clinical channel patch-co	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane Medicine): Critical period	EQP OPR No. 2 8 1 1 4 15 Award OPR OPR OPR	\$ \$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380 35,000	AHEMR MRC Agency AHEMR MRC CDA MRC AHEMR
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo nivestigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic roles and intestinal good convestigator with Thotal converse	in hippocampa transmission ransmission in No. 1 2 12 15 gy Project of potassium confithe calcium and allucose absorphimson, A B R (Insport of processing seconds or processing seconds.	\$\$\$ \$\$ TTitle hannand c dotro Media Media	eathetic ganglia Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins cine and Clinical channel patch-co	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane Medicine): Critical period	EQP OPR No. 2 8 1 4 15 Award OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380 35,000	AHEMR MRC Agency AHEMR MRC CDA
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo nivestigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic role Cheeseman, C I Diabetes and intestinal granishing to co-investigator with Thomprogramming Co-investigator with Thomprogramming Control of intestinal transferench, A S Computing equipment for Sensory transduction in larvey, S	transmission ransmission in No. 1 2 12 15 15 16 17 18 19 19 19 19 19 19 19 19 19	\$\$\$ \$\$ TTitle hannand c dotro Media Media	eathetic ganglia Amount 41,250 57,503 532,200 630,953 els yclic nucleotide pins cine and Clinical channel patch-co	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane Medicine): Critical period	EQP OPR No. 2 8 1 4 15 Award OPR OPR OPR	\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380 35,000 33,656 24,622 45,576	AHEMR MRC Agency AHEMR MRC CDA MRC AHEMR MRC
Role of cholinergic input Smith, P A Modulation of ganglionic Modulation of synaptic to Type of Award Contracts Equipment Operating Total Department of Physiolo Investigator Benishin, C G Presynaptic modulation Bourne, G A Delineation of the roles of mediating the biphasic receives and intestinal good convestigator with Thotal transport in Co-investigator with Thotal programming Control of intestinal transferench, A S Computing equipment for Sensory transduction in	in hippocampa transmission ansmission in No. 1 2 12 15 gy Project of potassium confithe calcium and allucose absorphimson, A B R (Insport or processing simechanoreceptes	\$ \$ \$ Title hanned codotro Medical Medical Medical Medical	els yclic nucleotide pins channel patch-cand photorecept	Source of Funds AHFMR MRC Other Provincial Other Agencies Total messenger systems in Medicine): Intestinal membrane Medicine): Critical period	EQP OPR No. 2 8 1 1 4 15 Award OPR OPR OPR	\$ \$	33,348 37,572 Amount 57,503 282,709 97,600 193,141 630,953 Amount 136,090 38,380 35,000	AHEMR MRC Agency AHEMR MRC CDA MRC AHEMR

nvestigator	Project Title			Award		Amount	Agency
utchison, K J							
Hemodynamics and atheros	clerosis			OPR	\$	42,640	CHF
Co-investigator with Weir, B	(Surgery and (Clinical Surgery):	Purchase of xenon perfusion				
system							
ang, PK	id barmana in I			OPR	ው	40.000	NSERC
Vascular action of parathyro					\$	40,000	
Research and development	oi riaturai caici	um antagonists a	as merapeulic agents	TTR	\$	220,000	NSERC
Herbal medicine program earson, K G				CTR	\$	200,000	TAIHO
Morphological and electroph	vsiological stud	dies on identified	neurons	OPR	\$	55,601	MRC
znansky, M J	, · · · · · · · · · · · · · · · ·				•	,	
International symposium on 7-10/87	Lipoprotein Me	tabolism, to be h	neld at Banff, Alberta, May	CFC	\$	16,000	AHFMR
Electron paramagnetic resolution temperature accessory	nance spetrom	eter Bruker ER 2	00D-SRC-9/2.7 plus variable	EQP	\$	224,175	AHFMR
SOD-Albumin conjugates				CTR	\$	21,000	DEBIO
Soluble enzyme albumin po	ymers: New an	proaches to enz	yme therapy	OPR	\$	83,477	MRC
ochazka, A							
Neural control of mammalia				OPR	\$	60,000	AHFMR
Co-investigator with Stein, F	B: Instrument	ation for develop	ing				
nders, E J	a 200 alastran	mioronacno		OPR	æ	0 064	MRC
Maintenance grant for Philip			ione in early development	OPR	\$	8,064 40,227	MRC
Physiological and morphologin, R B	gicai aspecis o	cenular interacti	ions in early development	OPR	\$	40,227	MULC
Instrumentation for developi	ng biotelemetry	and prosthetics		EQP	\$	36,204	AHFMR
Kinetics of contraction in inta	-	•		OPR	\$	46,000	MDA
Neurophysiological studies				OPR	\$	71,934	MRC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Conferences	1 \$	16,000	AHFMR	7	\$	675,831	
Contracts	2 \$	221,000	MRC	8	\$	376,915	
Equipment	3 \$	285,001	NSERC	3	\$	300,000	
Operating	16 \$	955,385	Other Agencies	5	\$	344,640	
Technology Transfer Total	1 \$ 23 \$	220,000 1,697,386	Total	23	\$	1,697,386	
1014	Ψ	1,007,000					
epartment of Psychiatry	Brainet Title			Award		Amount	Aganau
vestigator	Project Title			Award		Amount	Agency
iker, G B Hewlett Packard robotic arm kit, and warranty extension:		npler (injector) fo	r gas chromatograph, interface	EQP	\$	11,263	AHFMR
Establishment of an Alberta neurochemical bases of psy	Mental Health		Research Unit to study the	OPR	\$	250,000	AMHAC
and, R C Family study of mental disor	ders			OPR	\$	61,488	AMHAC
ornstein, R A							
Co-investigator with Baker, whurst, W G							
Co-investigator with Baker, buglass, A B	G B: Hewlett P	ackard robotic ar	m automatic				
Co-investigator with Baker,	G B: Establishr	nent of an Albert	a Mental				
reenshaw, A J			· · · · · · · · · · · · · · · · · · ·				
Hewlett Packard high perfor	mance liquid cl	romatograph 10	90L plus options	EQP	\$	35,460	AHFME
Co-investigator with Baker,	G B: Hewlett P	ackard robotic ar	m automatic				
Chronic effects of B-pheylet receptors	hylamine, trypt	amine and antide	epressants on brain amine	OPR	\$	40,308	AMHAC
Co-investigator with Baker,	G B: Establishr	nent of an Albert	a Mental				
Co-investigator with Piper, \ ewman, S C	V E: Preconditi	ons and respons	e to psychodynamic				
Co-investigator with Bland,	R C: Family stu	dy of mental disc	orders				

vestigator	Project 7	Title			Award		Amount	Agency
oer, W E								
Preconditions and repsychotherapy	response to psychod	lynam	ic interpretation	ns in short-term individual	OPR	\$	38,474	AMHAC
A controlled study of	of effectiveness and	patien	nt suitability for	short-term group psychotherapy	OPR	\$	34,000	CPRF
						_		
A controlled study of	of patient suitability a	and ou	itcome in short	term, individual psychotherapy	OPR	\$	37,354	HWC
A controlled study of Type of Award	of patient suitability a <i>No</i> .	and ou	itcome in short Amount	term, individual psychotherapy Source of Funds	OPR	\$	37,354 Amount	HWC
Type of Award		and ou				\$ \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	HWC
·	No.		Amount	Source of Funds	No.		Amount	HWC
Type of Award Equipment	No. 2	\$	Amount 46,723	Source of Funds AHFMR	No.	\$	Amount 46,723	HWC
Type of Award Equipment Operating	No. 2 6	\$ \$	Amount 46,723 461,624	Source of Funds AHFMR Other Provincial	No.	\$	Amount 46,723 390,270	HWC

Department of Radiology and Diagnostic Imaging

Investigator Project Title Award An	\mount	Agency
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McEwan, A J B

Co-investigator with MacLean, G (Medicine and Clinical Medicine):

Radioimmunoscintigraphy using novel . . .

Miller. J D R

Co-investigator with Allen, P S (Group NMR): In vivo applications of NMR spectroscopy . . .

Co-investigator with Weir, B (Surgery and Clinical Surgery): Purchase of xenon perfusion system . . .

Russell, D B

Ćo-investigator with Weir, B (Surgery and Clinical Surgery): Purchase of xenon perfusion system . . .

Department of Surgery and Clinical Surgery

Investigator	Project Title	Award		Amount	Agency
Boisvert, D P J					1
Co-investigate	or with Allen, P S (Group NMR): In vivo applications of NMR spectroscopy				
Bowes, K L	p.	000	•	55.040	
G I motility stu	idles	OPR	\$	55,849	MRC
Gana, T J	or with Koo, J: To measure regional gastric mucosal				
Hamilton, S M	With Noo, o. To measure regional gastile macosar				
	pulsion in hemorrhagic shock	OPR	\$	8,062	CFAGS
Knetemán, N M				•	
	immunodulation & immunosuppression	OPR	\$	101,772	AHFMF
Koo, J	of marked that the above and bland them.	000	•	0.000	05.400
	of gastrointestinal mucosal blood flow	OPR	\$	9,880	CFAGS
	egional gastric mucosal blood flow during gastroscopy using Laser-doppler I hydrogen gas clearance	OPR	\$	18,000	MSI
	of regional gastric mucosal blood flow during endoscopy using Laser-doppler I hydrogen gas clearance	OPR	\$	30,000	SEARL
McKean, J D S					
	or with Allen, P S (Group NMR): In vivo applications of NMR spectroscopy				
Rajotte, R V	and the second state of the sta	050	•	F 000	A 1 15 A 45
-	yogiology, 24th Annual Meeting, to be held in Edmonton, Alberta, Jun 22-26/87	CFC	\$	5,000	AHFMF
Co-investigate transport in .	or with Thomson, A B R (Medicine and Clinical Medicine): Intestinal membrane				
Cryopreserva	tion of pancreatic islet tissue for transplantation	OPR	\$	49,490	MRC
	or with Clandinin, M T (Home Economics, Foods and Nutrition): Demonstration significance				
Reid, D C					
Co-investigate trauma and a	or with Baracos, V E (Agriculture and Forestry, Animal Science): Effects of thletic				
Russell, J C					
Ischemic hea	rt disease in a rat model	OPR	\$	31,200	CHF
	the insulin resistant atherosclerosis-prone LA/N rat with acarbose	OPR	\$	9,000	MILES
Smith, R S					
	of axonal transport	OPR	\$	32,007	MRC
Soenen, G M	or with Koo. I: To measure regional gastric musecal				
OU-mvestigat	or with Koo, J: To measure regional gastric mucosal				

nvestigator	Project	Title		1.00	Award		Amount	Agency
Stockbridge, N L								
•	r with Weir, B: Vascular	smoo	th muscle electr	rical				
Role of calciu	n in transmitter release				OPR	\$	11,267	MRC
Narnock, G L								
Isolation and	mmunomodulation of hu	man i	slets		OPR	\$	37,071	MSI
Weir, B					OPR	\$		
Vascular smo	Vascular smooth muscle electrical activity in vasospasm						10,000	CHF
Surgical rese	rch				OPR	\$	60,000	ECECA
	prevention of chronic conhemorrhage in primates	erebra	al vasospasm ar	nd delayed ischemia following	OPR	\$	49,466	MRC
Purchase of >	enon perfusion system				EQP	\$	63,500	MSI
	ffect of U-74006F (expe	rimen	tal drug) on neu	rological recovery	CTR	\$	65,100	UPJ
•	• •		• ,	ge (awarded \$1,000 per patient)	CTR		·	UVA
Type of Awa	rd No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	5,000	AHFMR	2	\$	106,772	
Contracts	1	\$	65,100	MRC	5	\$	198,079	
Equipment	1	\$	63,500	Other Agencies	11	\$	341,813	
Operating	15	\$	513,064	Total	18	\$	646,664	
Total	18	\$	646,664					

Faculty of Nursing

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	1	\$ 3,180	AHFMR	1	\$ 30,016
Equipment	1	\$ 30,016	Other Provincial	6	\$ 33,744
Operating	10	\$ 39,870	Other Federal	1	\$ 3,000
Total	12	\$ 73,066	Other Agencies	4	\$ 6,306
		•	Total	12	\$ 73,066

Faculty of Nursing

Investigator	Project Title	Award		Amount	Agency
Allen, M					
Deve	opment of a research proposal to study the informational needs of persons with Iritis	OPR	\$	2,500	AFNR
The r	ole of perceived uncertainty in coping with chronic illness	OPR	\$	2,500	AFNR
Co-in	vestigator with Morse, J M: Microcomputers, software and accessories,				
Bell, L M					
	vestigator with Field, P A: Nurses perceptions of their role				
Bergum, V					
	vestigator with Ross, J D: The ethnography of childhood: 2nd				
Davies, E M	y responses to supportive care: Phase 1	OPR	\$	20,564	AFNR
Field, P A	y responses to supportive care. Finase i	OFN	Ψ	20,304	AUNII
	ploration of the attachment of mothers to pre-term infants - M N Candidate -	OPR	\$	2,706	AARN
	r-Fryer B			•	
	es perceptions of their role and functions in the ER setting: A descriptive study - M N	OPR	\$	350	AARN
Kerr, J C	idate Bell L M				
	ssment of quality of nursing care - the psychosocial domain - Student - Forrest, D	OPR	\$	2,500	AFNR
	vestigator with Yonge, O: Preceptorship in nursing education	• • • • • • • • • • • • • • • • • • • •	•	_,000	
Morse, J M	vestigator with ronge, o. r receptorship in hursing cudoation				
	cultural context of infant feeding among the Cree - M N Candidate - Neander W	OPR	\$	2,420	AARN
	escent health: An emic perspective - M N Candidate - Telford L A	OPR	\$	830	AARN
Micro	computers, software and accessories, video equipment and other, and interviewing ment	EQP	\$	30,016	AHFMR
	nal Health Research Scholar award	OPR	\$	3,000	HWC
Payne, L A	na ricati ricacatori condiai awara	J. 11	Ψ	3,000	

Co-investigator with Allen, M: The role of perceived uncertainty . . .

Investigator	Project Title	Award	Amount	Agency
	of childhood: 2nd International Workshop, July 6-8/87, Camrose itute, Camrose, Alberta	CFC	\$ 3,180	AFNR
Yonge, O Preceptorship in	nursing education	OPR	\$ 2,500	AFNR

Faculty of Pharmacy and Pharmaceutical Sciences

Type of Award	No.	Amount	Source of Funds	No.		Amount
Contracts	1	\$ 25,000	AHFMR	3	\$	78.050
Equipment	2	\$ 38,050	MRC	11	\$	404,649
Infrastructure	1	\$ 40,000	NSERC	2	\$	49,000
Operating	14	\$ 468,649	Other Agencies	3	\$	71,000
Technology Transfer	1	\$ 31,000	Total	19	\$	602,699
Total	19	\$ 602.699			•	,

Faculty of Pharmacy and Pharmaceutical Sciences

Investig	ator Project Title	Award	Amount	Agency
Coutts	RT			
	Co-investigator with Baker, G B (Medicine, Psychiatry): Hewlett Packard robotic arm automatic			
	Co-investigator with Baker, G B (Medicine, Psychiatry): Establishment of an Alberta Mental			
	Co-investigator with Jamali, F: Stereoselective pharmacokinetics			
	Co-investigator with Jordan, R B (Science, Chemistry): Mass spectometry service laboratory			
	son, T J			
	Co-investigator with Baker, G B (Medicine, Psychiatry): Establishment of an Alberta Mental			
Dean	For Compart of Madical Bosonish value the CLOWDOVE Nuclear Booster	INIT (ф 40.000	ALIENAD
	For Support of Medical Research using the SLOWPOKE Nuclear Reactor		\$ 40,000	AHFMR MRC
	General research grant to the Dean for the support of research in the Faculty of Pharmacy and Pharmaceutical Sciences	OPH S	\$ 15,000	MRC
Jamali,		OPR S	\$ 38.380	MRC
Joshua	Stereoselective pharmacokinetics of certain non-steroidal antiinflammatory drugs	OPH 3	\$ 38,380	MAC
	Co-investigator with Scott, J R: Development of SPECT brain blood			
Knaus,				
	IBM PC XT computer system, Med Associates analog to digital converter system, Grass model 7-16P-35 polygraph system	EQP S	\$ 24,604	AHFMR
	Co-investigator with Wiebe, L I: CRC-30BC radioisotope dose calibrator			
	The design and pharmacological evaluation of new nitrogen heterocycles	OPR S	\$ 41,186	MRC
	Bruker AM-300 MHz nuclear magnetic resonance (NMR) operator salary and maintenance support	OPR S	\$ 51,145	MRC
	The design and pharmacological evaluation of heterocyclic calcium channel antagonists and agonists	d OPR	\$ 43,632	MRC
	Hewlett-Packard 5995A gas chromatograph-mass spectrometer (GC-MS), maintenance contract and technician- operator	OPR S	\$ 20,000	MRC
	Co-investigator with Wiebe, L I: Radiohalogenated pyrimidine nucleosides			
	Compound synthesis	CTR	\$ 25,000	ORTHO
Micetic				
	Co-investigator with Baker, G B (Medicine, Psychiatry): Establishment of an Alberta			
Noujaii	Mental			
Noujan	Co-investigator with Wiebe, L I: CRC-30BC radioisotope dose calibrator			
	Co-investigator with MacLean, G (Medicine, Medicine and Clinical Medicine):			
	Radioimmunoscintigraphy using novel			
	Aliphatic amines as potential radiopharmaceuticals for the study of lung function	OPR S	\$ 37,281	MRC

Investigator	Project Title	Award		Amount	Agency
Pasutto, F M					
	vith Jamali, F: Stereoselective pharmacokinetics				
Co-investigator w laboratory	vith Jordan, R B (Science, Chemistry): Mass spectometry service				
Rogers, J A					
P .	ilability of drugs formulation with phospholipids	OPR	\$	33,942	MRC
Scott, J R		TTD	Φ.	24 000	NOTEDO
Development of s Shysh, A J	SPECT brain blood flow radiodiagnostic agents	TTR	\$	31,000	NSERC
	with Wiebe, L I: CRC-30BC radioisotope dose calibrator				
•	gation of radiolabelled conjugated lectins	OPR	\$	22,205	MRC
Tam, Y K	ganon on announce a conjugance account		•	,	
Pharmacokinetic	s of lidocaine during prolonged intravenous infusion	OPR	\$	41,000	CHF
Estimation of ser	rum theophylline concentration in pediatrics using sustained release fo	rm OPR	\$	5,000	FISON
Wiebe, L I			_		
CRC-30BC radio	sisotope dose calibrator	EQP	\$	13,446	AHFMR
In vivo metabolis	m of fluorinated nucleosides using whole-body NMR	OPR	\$	54,934	MRC
Co-investigator v	vith Knaus, E E: Hewlett-Packard 5995A gas chromatograph-mass				
Radiohalogenate	ed pyrimidine nucleosides for use in diagnostic oncology and virology	OPR	\$	46,944	MRC
Wolowyk, M W					
Co-investigator v	vith Knaus, E E: IBM PC XT computer system, Med				
Co-investigator v	vith Knaus, E E: The design and pharmacological				
Hagfish erythroc	ytes: Characteristics of membrane transport systems	OPR	\$	18.000	NSERC

Faculty of Physical Education and Recreation

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	2	\$ 5,500	NSERC	1	\$ 9,476
Contracts	1	\$ 13,989	Other Provincial	9	\$ 267,573
Operating	19	\$ 394,023	Other Federal	10	\$ 70,533
Total	22	\$ 413,512	Other Agencies	2	\$ 65,930
		-	Total	22	\$ 413,512

Department of Athletic Services

Investigator	Project Title		Award	Amount	Agency
Steadward, R D A kinematic anal	lysis of wheelchair propulsion		OPR	\$ 5,550	SPC
Operating		Other Federal	1	\$ 5,550	

Department of Physical Education and Sport Studies

Investigator	Project Title	Award	Amount	Agency
Belcastro, A N				
Etiology of musc	le fatigue cellular perspectives	OPR	\$ 9,476	NSERC
Gervais, P				
Co-investigator v wheelchair	vith Steadward, R D (Athletic Services): A kinematic analysis of			
Hall, A				
Gender and dec	ision making in national sport organizations	OPR	\$ 13,000	FAS
The status of wo	men in selected national sport organizations	OPR	\$ 13,000	FAS
Field hockey stu	dy	OPR	\$ 3,000	FAS
Field hockey stu	dy	OPR	\$ 2,000	FAS
Hinings, C R	•			
Management of	change in provincial sport and recreation organizations	OPR	\$ 14,984	ARP

Co-investigator with Quinney, H A: Alberta fitness leadership certification . . .

Co-investigator with Quinney, H A: University of Alberta Fitness Unit . . .

restigator	Project 7	Title			Award		Amount	Agency
endryk, S W								
	acos, V E (Agri	cultu	re and Forestry,	Animal Science): Effects of				
trauma and athletic								
tersen, S R Time-motion analysis of	ice-hockey offic	cials			OPR	\$	2,605	IHCE
inney, H A	ioc riockey one	olalo			0	Ψ	2,000	02
Álberta fitness leadership	o certification p	rogra	ım		OPR	\$	63,325	AFLCA
University of Alberta Fitn	ess Unit				OPR	\$	22,500	ARP
Fitness appraisal certification		OPR	\$	4,000	ARP			
Co-investigator with Pete	ersen, S R: Tim	ne-mo	otion analysis of	ice-hockey				
Fitness unit manager					OPR	\$	6,000	RPWF
Provincial and regional fi	tness resource	e cent	tres		OPR OPR	\$	185,700	RPWF
	High velocity resistance training for ice hockey							SPC
ack, T	0.0.14			and tractal				
Co-investigator with Hini	_	-	_		050	φ	E00	ACC
	•			nference, November 5-7, 1987	CFC	\$	500	ASC
Co-investigator with Hall								
Co-investigator with Hini	ngs, C H (Busi	ness,	. Organizational	Analysis): Planning,				
organization and implem		CFC	Œ	5,000	SPC			
A National Conference on hith, M	ıı əport Aamın	เรเเสโ	1011		OFC	\$	5,000	SEC
	a family/comm	unity	developmental	hockey program for children up	OPR	\$	4,900	ASC
to about 12 years of age				, programmer on an ap		•	,,=	
alsh, C								
Co-investigator with Stea	adward, R D (A	Athleti	c Services): A k	inematic analysis of				
Co-investigator with Stea wheelchair	adward, R D (A	Athleti	c Services): A k	inematic analysis of				
Co-investigator with Stea wheelchair atkinson, E J	·		·		OPR	\$	8.700	CFLRI
Co-investigator with Stea wheelchair atkinson, E J	·		·	inematic analysis of tally handicapped children in	OPR	\$	8,700	CFLRI
Co-investigator with Stea wheelchair atkinson, E J The effects of motor com physical activity	·		·		OPR	\$	8,700 Amount	CFLRI
Co-investigator with Stea wheelchair atkinson, E J The effects of motor com physical activity Type of Award	npetency on the	e inte	rgration of ment	tally handicapped children in	No.		Amount	CFLRI
Co-investigator with Stea wheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences	npetency on the No.	e inte	rgration of ment Amount 5,500	Source of Funds NSERC	<i>No.</i>	\$	<u>Amount</u> 9,476	CFLRI
Co-investigator with Stea wheelchair atkinson, E J The effects of motor com physical activity Type of Award	npetency on the	e inte	rgration of ment	tally handicapped children in	No.		Amount	CFLRI
Co-investigator with Steamheelchair Intkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating	npetency on the No.	e inte	Amount 5,500 361,190	Source of Funds NSERC Other Provincial Other Federal Other Agencies	No. 1 7 7 2	\$ \$ \$ \$	9,476 238,584 52,700 65,930	CFLRI
Co-investigator with Steamheelchair Intkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating	npetency on the No.	e inte	Amount 5,500 361,190	Source of Funds NSERC Other Provincial Other Federal	No. 1 7 7	\$ \$ \$	Amount 9,476 238,584 52,700	CFLRI
Co-investigator with Stea wheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total	No. 2 15	e inte	Amount 5,500 361,190 366,690	Source of Funds NSERC Other Provincial Other Federal Other Agencies	No. 1 7 7 2	\$ \$ \$ \$	9,476 238,584 52,700 65,930	CFLRI
Co-investigator with Stea wheelchair atkinson, E J The effects of motor com physical activity Type of Award Conferences Operating	No. 2 15	e inte	Amount 5,500 361,190 366,690	Source of Funds NSERC Other Provincial Other Federal Other Agencies	No. 1 7 7 2	\$ \$ \$ \$	9,476 238,584 52,700 65,930	CFLRI Agency
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation	No. 2 15 17	e inte	Amount 5,500 361,190 366,690	Source of Funds NSERC Other Provincial Other Federal Other Agencies	No. 1 7 7 2 17	\$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690	Agency
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation vestigator eron, R P Foreign delegate attenda	No. 2 15 17 Dn and Leis Project	\$ \$ \$ \$ Sure	Amount 5,500 361,190 366,690 Studies	Source of Funds NSERC Other Provincial Other Federal Other Agencies	No. 1 7 7 2 17	\$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690	
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation restigator Fron, R P Foreign delegate attendate Leisure and Recreation	No. 2 15 17 Dn and Leis Project	\$ \$ \$ \$ Sure	Amount 5,500 361,190 366,690 Studies	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 1 7 7 2 17	\$ \$ \$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690 Amount	Agency
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation restigator Fron, R P Foreign delegate attendation attender, H A	No. 2 15 17 Dn and Leis Project ance building a Association, La	\$ \$ \$ \$ activitie	Amount 5,500 361,190 366,690 Studies les for the 1st Woulse, 1988	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 1 7 7 2 17 Award CTR	\$	Amount 9,476 238,584 52,700 65,930 366,690 Amount	Agency ATOUR
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation restigator Fron, R P Foreign delegate attenda Leisure and Recreation stinney, H A Alberta Olympic game p	No. 2 15 17 Dn and Leis Project ance building a Association, La	\$ \$ \$ \$ activitie	Amount 5,500 361,190 366,690 Studies les for the 1st Woulse, 1988	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 1 7 7 2 17	\$ \$ \$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690 Amount	Agency
Co-investigator with Steamheelchair	No. 2 15 17 Dn and Leis Project ance building a Association, La	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies ies for the 1st Woulse, 1988 program	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 1 7 7 2 17 Award CTR	\$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690 Amount	Agency ATOUR
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation restigator eron, R P Foreign delegate attenda Leisure and Recreation Leisure and Recreation linney, H A Alberta Olympic game p ofton, J M Co-investigator with Wal	No. 2 15 17 Dn and Leis Project ance building a Association, La	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies ies for the 1st Woulse, 1988 program	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 1 7 7 2 17 Award CTR	\$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690 Amount	Agency ATOUR
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation vestigator eron, R P Foreign delegate attenda Leisure and Recreation A Alberta Olympic game p vestigator, H M Increasing exercise adherences	No. 2 15 17 Don and Leis Project ance building a Association, La lan, athlete tes nkel, L M: An a	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies ies for the 1st Wouise, 1988 program sis of children's of	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total	No. 1 7 7 2 17 Award CTR	\$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 9,476 238,584 52,700 65,930 366,690 Amount	Agency ATOUR
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation vestigator eron, R P Foreign delegate attenda Leisure and Recreation A Alberta Olympic game p efton, J M Co-investigator with Wall	No. 2 15 17 Dn and Leis Project ance building a Association, Lalan, athlete tes nkel, L M: An a erence through	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies ies for the 1st Woulse, 1988 brogram sis of children's enseling based of	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total Vorld Congress of the World casual n Janis' (1983) short-term	No. 1 7 7 2 17 17 Award CTR	\$	Amount 9,476 238,584 52,700 65,930 366,690 Amount 13,989	Agency ATOUR ASC
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation vestigator eron, R P Foreign delegate attenda Leisure and Recreation alinney, H A Alberta Olympic game pointon, J M Co-investigator with Wallankel, L M Increasing exercise adhounceling guidelines	No. 2 15 17 Dn and Leis Project ance building a Association, Lalan, athlete tes nkel, L M: An a erence through	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies ies for the 1st Woulse, 1988 brogram sis of children's enseling based of	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total Vorld Congress of the World casual n Janis' (1983) short-term	No. 1 7 7 2 17 Award CTR OPR	\$	Amount 9,476 238,584 52,700 65,930 366,690 Amount 13,989 15,000	Agency ATOUR ASC CFLRI
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation vestigator eron, R P Foreign delegate attenda Leisure and Recreation A Alberta Olympic game p vestigator, H A Alberta Olympic game p vestigator, H A Alberta Olympic game p vestigator, H A Alberta Olympic game p vestigator with Wall ankel, L M Increasing exercise adh counseling guidelines An analysis of children's	No. 2 15 17 Dn and Leis Project ance building a Association, La lan, athlete tes nkel, L M: An a erence through	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies Studies Studies First the 1st Woulse, 1988 Forogram First of children's conselling based of the sport of	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total Vorld Congress of the World casual n Janis' (1983) short-term	No. 1 7 7 2 17 Award CTR OPR OPR	\$	Amount 9,476 238,584 52,700 65,930 366,690 Amount 13,989 15,000 8,939 3,344	Agency ATOUR ASC CFLRI
Co-investigator with Steamheelchair atkinson, E J The effects of motor comphysical activity Type of Award Conferences Operating Total epartment of Recreation vestigator eron, R P Foreign delegate attenda Leisure and Recreation Leisure and	No. 2 15 17 Don and Leis Project ance building a Association, La lan, athlete tes nkel, L M: An a erence through a casual attribut	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Amount 5,500 361,190 366,690 Studies	Source of Funds NSERC Other Provincial Other Federal Other Agencies Total Vorld Congress of the World casual n Janis' (1983) short-term outcomes Source of Funds	No. 1 7 7 2 17 Award CTR OPR OPR OPR No.	\$	Amount 9,476 238,584 52,700 65,930 366,690 Amount 13,989 15,000 8,939 3,344 Amount	Agency ATOUR ASC CFLRI

Faculty of Rehabilitation Medicine

Type of Award	No.	Amount	Source of Funds	No.	Amount
Operating	5	\$ 157,860	NSERC	1	\$ 12,500
Total	5	\$ 157,860	Other Provincial	1	\$ 75,000
		ŕ	Other Federal	1	\$ 26,951
			Other Agencies	2	\$ 43,409
			Total	5	\$ 157,860

Department of Physical Therapy

'nvestigator	Project 1	itle		Award		Amount	Agency
Kumar, S	•••						
Functional evaluation	on of human back			OPR	\$	75,000	ACOH
Static and dynamic	strength		OPR	\$	12,500	NSERC	
Piper, M C	-					·	
Impact of pre-term	birth of the neuromor	of the premature infant	OPR	\$	26,951	HWC	
Effect of early phys	OPR	\$	12.000	MDBDF			
			or and ingition and	0	7	,	
Type of Award	No.	Amount	Source of Funds	No.	•	Amount	
			•		\$,.	555.
Type of Award	No.	Amount	Source of Funds			Amount	
Type of Award	No.	Amount	Source of Funds NSERC		\$	Amount 12,500	
Type of Award	No.	Amount	Source of Funds NSERC Other Provincial		\$ \$	Amount 12,500 75,000	

Department of Speech Pathology and Audiology

Investigator	Project Title	Award	Amour	nt Agency	
<u> </u>	of the central nervous system differences in stutterers and their everity and success in therapy	OPR	\$ 31,40	9 MSI	

Gough, K

Co-investigator with Faulkner, M G (Engineering, Mechanical Engineering): Hearing protection device evaluation . . . Hagler, P

Co-investigator with Boberg, E: An investigation of the central . . .

Operating **Other Agencies** 1 \$ 31,409

Faculté Saint-Jean

Type of Award	No.	Amount	Source of Funds	No.	Amount
Operating	1	\$ 5,500	Other Federal	1	\$ 5,500
Total	1	\$ 5,500	Total	1	\$ 5,500

Faculté Saint-Jean

Investigator	Project Title	Award	Amount	Agency
Allaire, G Septieme colloqu	ue du CEFCO: Ecriture et politique	OPR	\$ 5,500	SSC

Cadrin, G
Co-investigator with Allaire, G: Septieme colloque du CEFCO: Ecriture . . .

Faculty of Science

Type of Award	No.	Amount	Source of Funds	No.	Amount
Conferences	5	\$ 55,750	AHFMR	8	\$ 524,225
Contracts	49	\$ 2,326,231	MRC	2	\$ 87,554
Equipment	24	\$ 1,054,513	NSERC	292	\$ 8,888,346
Infrastructure	8	\$ 285,508	SSHRC	2	\$ 18,730
Operating	322	\$ 8,925,172	Other Provincial	29	\$ 1,364,288
Technology Transfer	4	\$ 352,580	Other Federal	35	\$ 1,098,131
Total	412	\$ 12,999,755	Other Agencies	44	\$ 1,018,480
		, ,	Total	412	\$ 12.999.755

Department of Botany

Department of Bota	any				
Investigator	Project Title	Award		Amount	Agency
Bayer, R J		000		7.474	NOFFIC
-	stigations on the Antennaria rosea (asteraceae:Inuleae) Agamic complex	OPR	\$	7,474	NSERC
Cass, D D Research on gam	ete cell fusion in flowering plants; Brassica root infection by pseudomona	OPR	\$	15,000	NSERC
Cossins, E A		000	•	50.000	NOEDO
Dale, M R T	acid metabolism in plants	OPR	\$	59,666	NSERC
Spatial distribution	n in communities of Saxicolous lichens	OPR	\$	15,000	NSERC
Denford, K E					
Shrub recolonizat W Zbigniewicz	ion patterns in disturbed areas of the Rocky Mountain foothills - student M	OPR	\$	9,045	AERT
Biosystematics ar	nd chemosystematics of northern vascular plants	OPR	\$	21,817	NSERC
	re - student Elizabeth Beaubien	OPR	\$	4,000	RPWF
Gifford, D J		000	•	05.000	NOEDO
Cellular and mole seeds	cular control of protein storage reserve mobilization in germinating pine	OPR	\$	35,000	NSERC
Hickman, M					
	ıl, paleoenvironmental and algal studies in Alberta	OPR	\$	20,160	NSERC
Hoddinott, J	•				
	vironmental influences on carbon partitioning	OPR	\$	12,977	NSERC
Co-investigator w	ith Taylor, G J: Basic and applied aspects of aluminum				
	ood Bison on sedge meadow vegetation, Mackenzie Bison Sanctuary, student: David L. Smith)	CTR	\$	1,750	EC
	ction of boreal forest ecosystems: synthesis	OPR	\$	12,000	NSERC
Packer, J G	nent - Taxonomic and phytogeographical studies in the flora of western	OPR	\$	1,360	NSERC
Canada and the		OFR	Ψ	1,300	NOLINO
	hytogeographical studies in the flora of western Canada and the Arctic	OPR	\$	4,800	NSERC
Stockey, R A	antiam valanda fuana varadana Osmanla	OPP	ው	00.040	NSERC
Taylor, G J	ertiary plants from western Canada	OPR	\$	23,040	NOENU
	chanisms of aluminum tolerance in Triticum aestivum and other plants	OPR	\$	17,280	NSERC
	d aspects of aluminum and manganese tolerance in Canadian wheat	OPR	\$	50,000	NSERC

Investigator	Project Title	·		Award		Amount	Agency
Co-investigator with Prep	oas, E E (Zoology)	: Meanook Biolog	phosphorus, nitrogen gical Research Station sterization and development of	OPR	\$	40,320	NSERC
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts	1 \$	1,750	NSERC	15	\$	335,894	
Operating Total	17 \$ 18 \$	348,939 350,689	Other Provincial Other Federal Total	1 1 18	\$ \$ \$	13,045 1,750 350,689	
Department of Chemistr	У						
Investigator	Project Title)		Award		Amount	Agency
Armour, M A		_		ODD	•	71 400	ACOLL
hazardous waste			nical methods for handling	OPR OPR	\$ \$	71,400 4,655	ACOH DOCK
Ayer, W A Lycopodium alkaloids: Po	otential therapeuti	c agents for the t	reatment of Alzheimer's disease	OPR	\$	31,560	AMHAC
	-	-	on with the Universidad de Costa	TTR	\$	108,500	IDRC
expenses incurred by Dr	W A Ayer as Edit	or of the Canadia	-	CTR	\$	55,000	NRC
the mountain pine beetle Co-investigator with Tan Co-investigator with Grah	tion of important for ner, D D: HP 5965 ham, W A G: Mass	orest diseases. Bi 5A IRD. GC/FTIR s spectrometer a	ue stain fungi associated with nd data system	OPR	\$	67,000	NSERC
Co-investigator with Jord Structural and synthetic s		-		OPR	\$	100,025	NSERC
Vibrational spectroscopy	•		laboratory for research	OPR	\$	38,399	NSERC
Birss, F W Molecular spectroscopy). Tilgit-pressure	aboratory for research	OPR	\$	10,000	NSERC
	of hydrolysis reac	tions, electrophili	c halogenation and enzyme	OPR	\$	50,305	NSERC
models Co-investigator with Graf Browne, L M	ham, W A G: Mas	s spectrometer a	nd data system				
Co-investigator with Ayer	r, W A: Investigati	on of American L	eaf				
Liquid chromatography, i Cavell, R G	_		n	OPR	\$	49,345	NSERC
Synthetic inorganic chem Clarke, B L Stability, dynamics and c	·		c	OPR OPR	\$ \$	35,000 16,320	NSERC NSERC
Clive, D L J Synthesis of leukotriene	•		.	TTR	\$	18,000	MFC
Synthesis of leukotriene	•	•		TTR	\$	24,000	NSERC
Studies in synthetic meth Co-investigator with Jord				OPR	\$	49,267	NSERC
Cowie, M Metal-metal cooperativity Infrared Spectrophotome	eter			OPR EQP	\$ \$	40,129 24,730	NSERC NSERC
Co-investigator with Jord Dovichi, N		High Field NMR C	Centre	OPR	\$	48,615	NSERC
Laser-based microchemi Ultraviolet helium cadmiu Dunford, H B	-			EQP	\$ \$	20,000	NSERC
Heme enzyme mechanis				OPR	\$	54,267	NSERC

Investigator	Project Title	August		Amount	Agonoss
Investigator	Project Title	Award		Amount	Agency
Fraga, S					
Structure and		OPR	\$	25,109	NSERC
	retical prediction of the energy levels of atoms and their positive ions, awarded	OPR			NSERC
40 nours comp	puter time (approx. value of \$4,000.00)				
•	uids, radiation chemistry	OPR	\$	57,698	NSERC
Graham, W A G	•				
	or with Jordan, R B: Alberta High Field NMR Centre	500	•	400.000	NOFF
•	meter and data system	EQP	\$	196,000	NSERC
Harrison, D J	c chemistry and C-H activation	OPR	\$	70,000	NSERC
	of internal potentials and concentration profiles within ion specific membranes	OPR	\$	17,000	CIBAC
Spectroscopio	analysis of concentration profiles within membranes	OPR	\$	25,000	NSERC
Co-investigate	or with Baltes, H P (Engineering, Electrical Engineering): Integrated sensors on				
silicon			_		
	nd chemically sensitive devices	OPR	\$	26,000	NSERC
Hepler, L G Kinetics and e	energetics of oxidation of bitumen, solubilities of gases, and properties of	CTR	\$	89.992	AOSTR
emulsions	g p. p	_	·	,	_
Chemical ther	modynamics	OPR	\$	50,879	NSERC
Hindsgaul, O	2000 managativa ahyamatagyankia ayatam	EOD	\$	40.700	AHFMR
	Prep - 3000 preparative chromatographic system ovel processes for the large scale synthesis (kilogram scale) of trisaccharides A	EQP CTR	\$ \$	43,700 97,630	CHEM
	numan blood group ABO systems	OIII	Ψ	97,030	CHLIN
	or with Graham, W A G: Mass spectrometer and data system				
	of ELISA assays for glycosyltransferases	OPR	\$	42,400	NSERC
Biological fund	ctions of complex carbohydrates	OPR	\$	19,200	NSERC
Co-investigato	or with Jordan, R B: Alberta High Field NMR Centre				
	or with Vederas, J C: Liquid scintillation counter				
Hogg, A M	or with Kebarle, P: Instrumental and analytical methodology				
Horlick, G	of with Rebaile, F. instrumental and analytical methodology				
	and application of methods and systems for spectrochemical analysis	OPR	\$	90,000	NSERC
Direct reading	inductively coupled plasma-atomic emission spectrometer	EQP	\$	150,000	NSERC
	or with Kebarle, P: Instrumental and analytical methodology				
Huzinaga, S	al study of electronic properties of molecules	OPR	\$	41,279	NSERC
Jordan, R B	a study of electronic properties of molecules	Oin	Ψ	41,273	NOLITO
	mic instruments stopped-flow system	EQP	\$	18,281	NSERC
Ligand substit	tution and electron transfer mechanisms of transition metal complexes	OPR	\$	42,264	NSERC
•	netry service laboratory	INF	\$	32,000	NSERC
	Field NMR Centre	INF	\$	38,400	NSERC
	or with Horlick, G: Direct reading inductively coupled				
Kebarle, P Instrumental a Spectrometer	and analytical methodology development of the SCIEX TAGA 6000 Mass	TTR	\$	202,080	NSERC
•	n chemistry - relationships with ions in solution	OPR	\$	106,241	NSERC
Keil, M			•		
	r potentials: Inter and intra-molecular energy transfer	OPR	\$	21,120	NSERC
Kopecky, K R Co-investigate	or with Tanner, D D: HP 5965A IRD. GC/FTIR				
Kotovych, G	or man ramor, b b. rin occorring. Gon pire				
High-field NM	R studies of biological systems	OPR	\$	21,120	NSERC
	or with Jordan, R B: Alberta High Field NMR Centre				
Kratochvil, B	or with Horlick, G: Direct reading inductively coupled				
_	g and ion speciation methods for chemical analysis	OPR	\$	39,359	NSERC
Lemieux, R U	g and for specialion methods for chemical analysis	OFR	Φ	39,339	NOERO
Biological rec	ognition at the molecular level	OPR	\$	117,720	NSERC
	or with Jordan, R B: Alberta High Field NMR Centre				
Liu, H J	ent of organic synthetic methods. (2) Synthetic studies on natural products.	ODD	ø	40.000	NOCEDO
·	or with Tanner, D D: HP 5965A IRD. GC/FTIR	OPR	\$	42,239	NSERC
	or with Taillier, D.B.: 11 3300A http://doi/1111111111111111111111111111111111				
orvooligat	22.dan, r. 21. moona . ngri i lola (4mi Collifo				

Investigato	rP	roject Tit	le		Award		Amount	Agency
Lown, J W								
DN	A binding specificity of novel	anticance	er agents		EQP	\$	24,265	AHFMR
	de of action of antitumor antil		Ü		OPR	\$	71,905	NCI
Syn	thetic and mechanistic resea	rch in the	e fields of heterocy	clic and antibiotic chemistry	OPR	\$	70,000	NSERC
Co-	investigator with Graham, W	A G: Ma	ss spectrometer ai	nd data system				
Co-	investigator with Tanner, D [): HP 596	55A IRD. GC/FTIR	• • • •				
LKE	Bultroscan XL laser densiton	neter			EQP	\$	24,265	NSERC
DN	DNA sequence specific anticancer and antiviral agents						67,000	NSERC
-	The mechanism of antitumor action of nitrosoureas						56,400	USNIH
Martin, J S					000	•	4.000	
McClung, i	t year CAL curriculum				OPR	\$	4,000	UC
	dimensional NMR spectros	copy			OPR	\$	27,840	NSERC
	investigator with Jordan, R E		High Field NMR C	Centre		•	•	
Robins, M	J		-					
	investigator with Cass, C E (ems in	Medicine	, J S McEachern L	.aboratory): Nucleoside transport				
Cor	npounds related to nucleic a	cids			OPR	\$	67,842	NSERC
Strausz, O			6 - 11 - 147-1-1-1		OTD	Φ	00.040	AFNO
forn	fingerprinting and a facies fra nation: a geological perspect	ive			CTR	\$	30,310	AENCL
	emical studies on resins and itu oil production	asphalte	nes related to the t	hermal changes occurring during	CTR	\$	150,000	AOSTR
Upg	rading of Alberta's heavy oil	s by supe	eracid catalyzed hy	/drocracking	CTR	\$	60,000	AOSTR
Coa	ıl research development prog	gram			CTR	\$	123,150	ARC
	tracterization of cold lake he	-	-	•	OPR	\$	8,000	IOL
	investigator with Tanner, D [
	investigator with Graham, W		·			_		
	damental studies in petroleu		•	•	OPR	\$	43,200	NSERC
	investigator with Jordan, R E	: Mass s	pectometry service	e laboratory				
Takats, J	investigator with Graham, W	A G· Ma	ss spectrometer a	nd data system				
	anometallic complexes of the		•		OPR	\$	43,201	NSERC
_	investigator with Jordan, R E					•	,	
Tanner, D								
Co-	investigator with Graham, W	A G: Ma	ss spectrometer a	nd data system				
	5965A IRD. GC/FTIR				EQP	\$	92,331	NSERC
Co-	investigator with Jordan, R E	3: Mass s	pectometry service	e laboratory				
	dies on the mechanism of fre	e radical	reactions		OPR	\$	41,280	NSERC
Thorson, \	v R dies in theoretical chemistry:	(1) Atom	ic collision theory	(2) Vibrational dynamics	OPR	\$	32,640	NSERC
Vederas, J		(1) Alon	iic coilision theory	(2) Vibrational dynamics	Orn	Ψ	32,040	NOLITO
	Int. Symposium on Biosynth	esis			CFC	\$	15,000	AHFMR
Liqu	uid scintillation counter				EQP	\$	37,245	NSERC
Co-	investigator with Graham, W	A G: Ma	ss spectrometer a	nd data system				
Co-	investigator with Westlake, [W (Mic	obiology): Technic	cal support for fermentation				
Co-	investigator with Tanner, D [D: HP 59	65A IRD. GC/FTIR	1				
Med	chanism and inhibition of pol	yketide a	nd amino acid bios	synthesis	OPR	\$	69,240	NSERC
	investigator with Jordan, R E							
Co-	investigator with Jordan, R E	3: Alberta	High Field NMR C	Centre				
Тур	e of Award	No.	Amount	Source of Funds	No.		Amount	
Cor	nferences	1 :	15,000	AHFMR	3	\$	82,965	
Cor	ntracts	7	606,082	NSERC	50	\$	2,717,875	
•	uipment		630,817	Other Provincial	6	\$	526,102	
_	astructure		70,400 2,123,463	Other Federal	2 9	\$ \$	163,500 307,900	
	erating chnology Transfer		\$ 2,123,463 \$ 352,580	Other Agencies Total	7 0	Ф \$	3,798,342	
Tot			3,798,342			•	-, ,-	

Department of Computing Science

Investigator	Project Title	Award		Amount	Agency	
Armstrong, W W	Maraland T A. Distributed assessment					
	n Marsland, T A: Distributed computing research eriments in computing	OPR	\$	10 107	NOEDO	
Cabay, S	Siments in computing	OFR	Φ	18,197	NSERC	
Algebraic algorithms		OPR	\$	13,000	NSERC	
Co-investigator with Chan, E P	n Marsland, T A: Distributed computing research					
A comprehensible d	database design theory	OPR	\$	2,596	NSERC	
Culberson, J C	o of officions data as well and allowith	000	•			
Design and analysis Davis, W A	s of efficient data structures and algorithms	OPR	\$	15,000	NSERC	
	n Caelli, T M (Psychology): Computer assisted mammography					
Digital techniques in	• .	OPR	\$	22,940	NSERC	
Co-investigator with Dobosiewicz, W	n Marsland, T A: Distributed computing research					
Efficient operations	on non-disjoint sets	OPR	\$	15,000	NSERC	
Elio, R E			·			
	nd knowledge-based systems	OPR	\$	21,000	NSERC	
Gburzynski, P	n Marsland, T A: Distributed computing research					
Performance of com	nputing systems	OPR	\$	9,000	NSERC	
Goebel, R G Applications of logic	c-based automatic theory formation	OPR	\$	16,000	NSERC	
Green, M W	·	Orit	Ψ	10,000	NOENC	
	ser interface prototyping system	CTR	\$	10,000	CMC	
	Marsland, T A: Distributed computing research	OPP	•	00.000	NOEDO	
Joe, B	computer animation	OPR	\$	22,000	NSERC	
Mesh generation us	sing computational geometry	OPR	\$	15,000	NSERC	
Kamal, A N Access protocols for	r optical fiber-based local area networks	OPR	\$	13,500	NSERC	
Li, X	•	OFIT	Ψ	13,300	Noenc	
	approaches for computer vision and pattern recognition	OPR	\$	17,000	NSERC	
Marsland, T A Distributed system s	studies	OPR	\$	42,900	NSERC	
Distributed computing		INF	\$	66,240	NSERC	
Ozsu, M T		000				
_	ed databases with operating systems I Marsland, T A: Distributed computing research	OPR	\$	14,000	NSERC	
Pelletier, F J	· •					
	Marsland, T A: Distributed computing research					
Natural language un Rudnicki , P	nderstanding and heuristic theorem proving	OPR	\$	17,280	NSERC	
Specification and ve	erification of communication protocols	OPR	\$	12,500	NSERC	
Schaeffer, J	vahina	ODD	•	40.000	NOEDO	
Distributed tree sear Schubert, L K	rening	OPR	\$	19,000	NSERC	
Further developmen	nt of a semantic net system with inferential and question-answering	CTR	\$	171,409	BOE	
	methodologies for language analysis and generation	000	•	05.000	NOTES	
• •	nding, question-answering, and robotics Marsland, T A: Distributed computing research	OPR	\$	25,066	NSERC	
Stewart, L K	marsiand, FA. Distributed computing research					
	mposable bipartite graphs	OPR	\$	14,000	NSERC	
Szafron, D A Graphical user interf	faces for programming environments	OPR	\$	10,000	NSERC	
	Marsland, T A: Distributed computing research	•	•	10,000	NOLITO	
Tartar, J	, ·	005				
-	ractive and distributed computer systems	OPR	\$	25,406	NSERC	
White, L J	Marsland, T A: Distributed computing research					
Research in comput	• •	OPR	\$	27,950	NSERC	
	Marsland, T A: Distributed computing research					
You, J H Logic programming t	for artificial intelligence: An approach based on building in theories	OPR	\$	17,000	NSERC	
==3.5 p. 59.411111119		9 111	*	,500	.,52.10	

Investigator	Project Title)		Award		Amount	Agency
Type of Award	No.	Amount	Source of Funds	No.		Amount	
Contracts	2 \$	181,409	NSERC	25	\$	491,575	
Infrastructure	1 \$	66,240 425,335	Other Federal Other Agencies	1 1	\$ \$	10,000 171,409	
Operating Total	24 \$ 27 \$	672,984	Total	27	Φ \$	672,984	
	·	• ',			·	,	
Department of Genetics							
Investigator	Project Title			Award		Amount	Agency
Addison, W R Purification of a protein req glucocorticoids	uired for the req	gulation of a rat a	2u-globulin gene by	OPR	\$	124,621	AHFMR
Purification of a regulatory	DNA-binding pr	otein from rat live	er	OPR	\$	26,300	NSERC
Ahmed, A Mechanism of DNA transpo	sition in E. Coli	i		OPR	\$	44,520	NSERC
Bell, J B			anter and tONA publication		·	20.000	NSERC
Isolation of informational su modification deficient mutai				OPR	\$	20,000	NOERC
Co-investigator with Roy, K	L (Microbiolog	y): Applied biosys	stems model 381A-01				
Hastings, P J The mechanisms of recomb	oination in Sacc	haromyces cerev	risiae	OPR	\$	34,000	NSERC
Hodgetts, R B		-		ODD	φ.	10.000	AADT
Molecular basis of the resp			· -	OPR OPR	\$ \$	12,000 97,000	AART NSERC
Molecular genetic engineer Hormonal aspects of gene			e and calle	OPR	Ф \$	44,520	NSERC
Co-investigator with Roy, K	_		stems model 381 A-01	Orn	Ψ	44,320	NOLITO
Kuspira, J	L (MICIODIOIOG	y). Applied blosys	stems model 30 1A-01				
Cytogenetic studies of the	A genome in Tr	iticum		OPR	\$	20,301	NSERC
Nargang, F E Nuclear mitochondrial gene	interactions			EQP	\$	18,810	AHFMR
Mitochondrial gene express		ora crassa		OPR	\$	29,438	NSERC
	(Agriculture and	I Forestry): Genet	tic variation and adaptation				
Nash, D Molecular and genetic anal	ysis of purine n	netabolism in Dro	sophila	OPR	\$	40,000	NSERC
Reha-Krantz, L J	•			ODB	•	E0 005	NCI
Studies on the biochemical polymerase	basis of sponta	aneous mutation:	The function of the DNA	OPR	\$	50,295	NCI
-			al support for fermentation	ODD	Φ	20,000	NCCDO
Studies on the biochemical Russell, M A	Dasis of mutati	on		OPR	\$	32,000	NSERC
Genetic control of develop	mental pathway	s in Drosophila		OPR	\$	33,000	NSERC
Tyler, J M Co-investigator with Stein.	R B (Medicine.	Physiology): Insti	rumentation for developing				
von Borstel, R C	•	•			_		
A test of the theory of a thr	-		=	OPR	\$	30,000	ILSI
Moleular analysis of mutati agents	on spectra indu	iced by "nonmuta	genic" carcinogens and alkylating	OPR	\$	70,722	NSERC
Origin of spontaneous mut				OPR	\$	23,280	NSERC
Co-investigator with Roy, h	-		stems model 381A-01				
Metabolic control of post-ir A test of the theory of a thr			genesis in veast	CTR OPR	\$ \$	22,640 30,000	PRON RSI
-	-				•		
Type of Award	No.	Amount	Source of Funds AHFMR	No2	<u>e</u>	Amount 143,431	
Contracts Equipment	1 \$ 1 \$	22,640 18,810	NSERC	13	\$ \$	515,081	
Operating	18 \$	761,997	Other Provincial	1	\$	12,000	
Total	20 \$		Other Agencies	4	\$	132,935	
			Total	20	\$	803,447	

Investigator	Project T	ītle			Award		Amount	Agency
Campbell, I A								
Erosion rates, sediment deliv	ery ratios a	and th	ne evolution of t	he Red Deer badlands	OPR	\$	12,480	NSERC
Charlton, R B	Charlton, R B Analysis of polarization diversity radar data in central Alberta hailstorms							
Analysis of polarization diver England, J	sity radar d	iata ii	n central Alberta	a naiistorms	OPR	\$	13,000	EC
	oisostasv a	nd pa	aleoenvironmen	t of the high Arctic - \$6,900 paid	OPR			NSERC
to Polar Continental Shelf Pr				το, της της πους το,σου μαιο	•			
Quarternary glaciation, glacic	oisostasy a	nd pa	aleoenvironmen	t of the high Arctic	OPR	\$	24,000	NSERC
Hodgson, M J			_			_		
Transport network-based ge			•		OPR	\$	14,000	NSERC
Facility location models for d	eveloping o	count	ries		OPR	\$	13,980	SSHRC
Jackson, E L Leisure, recreation and the s	ocial scien	res			CFC	\$	4,750	SSHRC
Kershaw, G P	OOIGI SOIOIII	003			0, 0	Ψ	4,700	0011110
Studies of environmental effe	ects of distu	urban	ces in the suba	rctic	CTR	\$	40,290	CFS
The role of native plant spec	ies in pipeli	ine re	vegetation prog	grammes	OPR	\$	8,000	IOL
Lozowski, E P					0.00	•	45.000	50
Ship icing measurement and	torecasting	g			OPR	\$	15,000	EC
Soviet marine icing data		_			CTR	\$	9,980	EC
Measuring icing related para			•		CTR	\$	8,670	EC
Modelling and forecasting the	-				OPR	\$	6,471	NATO
Forecasting of ice growth rat			•	- - ,	CTR	\$	29,850	NRC
tunnel	: M (Engine	eering	g, Mechanicai E	ingineering): Marine icing wind				
Marine icing					OPR	\$	69,500	NSERC
Instrumentation for the meas	uromont of	i enla	shing and ice a	coretion on a Canadian ship	EQP	φ \$	28,092	NSERC
lcing research for marine app		эріа	simily and ice a	coretion on a Ganadian Ship	OPR	\$	19,920	NSERC
lcing model	Jiicalions				CTR	\$	40.000	STAT
-	cretion mo	del fo	r tranemission l	ines and applications to Alberta	CTR	\$	20,000	TAUC
Modelling vessel icing	Ciclion mo	uci ic	i transmission i	ines and applications to riberta	CTR	\$	9,999	USDA
Muller, J C					0 111	Ψ	3,555	CODA
Geo-processing and fractals					OPR	\$	20,000	NSERC
Wilson, J D					000	•		Norna
Flow through a shelterbelt Zakrzewski, W P					OPR	\$	14,000	NSERC
Co-investigator with Lozowsl	ki, E P: Mea	asuri	ng icing related	parameters				
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	4,750	NSERC	8	\$	201,992	
Contracts	7	\$	158,789	SSHRC	2	\$	18,730	
Equipment	1	\$	28,092	Other Federal	6	\$	116,790	
Operating	12	\$	230,351	Other Agencies	5	\$	84,470	
Total	21	\$	421,982	Total	21	\$	421,982	

Depar	tment of	Geo	logy
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Investigator	Project Title	Award	Amount	Agency
Baadsgaard	d, H			
Geo	chronometric analyses	CTR	\$ 12,000	ARUM
	chronology and petrogenesis of the Archean Kaminak Lake alkaline intrusion and the punding country rock	OPR	\$ 5,500	EMRC
Stror	nium and Sm-Nd isotope analyses	CTR	\$ 14,286	NSDME
	pe geology of: selected crustal areas, time-scale horizons, uranium mineralization and sh salt deposition	OPR	\$ 41,280	NSERC
Stror basir	ntium isotope analyses of 15 core chip samples from the western Canadian sedimentary	CTR	\$ 4,285	ULTRA
Burwash, R	I A			
West	tern Canada basin heat generation data base	OPR	\$ 6,000	EMRC

Investigator P	roject Title	Award		Amount	Agency	
Chatterton, B D						
	aleoecology of the Famennian Palliser formation and and British Columbia	OPR	\$	3,000	EMRC	
conodonts and rostroconchs	leoecology and paleoecology of paleozoic trilobites,	OPR	\$	34,390	NSERC	
Cruden, D M The stability of natural slopes in	rock	OPR	\$	28,800	NSERC	
Erdmer, P Structure and tectonics of alloch	thonous terranes of central Yukon	OPR	\$	16,600	NSERC	
Fox, R C Upper cretaceous and paleocen	e tetrapods from western Canada	OPR	\$	39,446	NSERC	
Johnston, D I Co-investigator with Chatterton,	B D: Conodont biostratigraphy and paleoecology					
Jones, B Diagenetic regimes associated v	with unconformities in carbonate sequences	OPR	\$	34,066	NSERC	
Lambert, R S J	· ·		,			
Lithoprobe: Isotope studies of gr Isotope studies of the western C		OPR OPR	\$ \$	8,000 29,000	NSERC NSERC	
Lerbekmo, J F	ordinera and or the marker	Orm	Ψ	23,000	NOLITO	
Magnetostratigraphic correlation foothills of southern Alberta	is in upper Cretaceous strata between the plains and	CTR	\$	3,018	EMRC	
Upper cretaceous - paleocene n Longstaffe, F J	nagnetostratigraphic and geochemical correlations	OPR	\$	4,000	EMRC	
 To develop numerical modelli clastic sedimentary basins, and 	ng techniques for the study of authigenic clay minerals in 2) To quantify the role that various diagenetic parameters of authigenic clays in zones of fluid mixing	OPR	\$	8,000	IOL	
Physicochemical investigations (of water-rock interaction in low temperature environments	OPR	\$	19,247	NSERC	
· · · · · · · · · · · · · · · · · · ·	studies on the Dawn Lake uranium deposit, Saskatchewan	OPR	\$	11,680	NSERC	
Isotopic studies on coal bitumen	•	OPR	\$	62,685	AENR	
Isotopic mass balance measure into coprocessing distillates	ments for determination of coal-derived liquid contribution	CTR	\$	50,000	EMRC	
	s and their application to geological problems	OPR	\$	28,000	NSERC	
_	 High-pressure laboratory for research and ore deposits 	OPR	\$	12,000	NSERC	
on Vancouver Island Nesbitt, B E	and study of politology, isotope geochemistry and ore deposits	Orn	Ψ	12,000	NOLITO	
	thermal gold-quartz veins of the Canadian Cordillera	OPR	\$	7,600	EMRC	
the Canadian Cordillera	cal investigations of the genesis of AU-AG mineralization in	OPR	\$	20,000	NSERC	
Pemberton, S G	chs, K: Lithoprobe phase II: An integrated					
A facies framework for the Wabi	P (Chemistry): Oil fingerprinting and a facies skaw member of the Clearwater formation: A geological	CTR	\$	30,310	AENCL	
perspective	sitional history of the south Athahassa oil sand deposit	CTR	\$	30,000	AOSTR	
Regional stratigraphy and depos	sitional history of the south Athabasca oil sand deposit sitional history of the Grand Rapids formation in the Cold plications for in situ extraction and development schemes	CTR	э \$	30,000 70,000	AOSTR	
	rbon potential of the Ostracode event: Jenner area, s.e.	OPR	\$	5,000	CHEL	
	ory of the Viking formation, Crystal field, Alberta	OPR	\$	8,000	IOL	
Sedimentologic and diagenetic s	study of the Jurassic, Basal Quartz, Ostracod and Glauconite e River and Sylvan Lake areas (graduate student lan Collar)		\$	9,000	MAXIS	
Ichnology of storm, tidal, and ma	· · · · · · · · · · · · · · · · · · ·	OPR	\$	26,000	NSERC	
	nents along the Arctic coast between Paulatuk and Cape	CTR	\$	5,000	DINA	
· -	eaufort Sea region sediment samples	CTR	\$	15,030	EMRC	
Determination of amino acid rati		CTR	\$	1,170	GSC	
Quaternary history and amino a	cid dating techniques	OPR	\$	30,000	NSERC	

Investigator	Project	Title			Award		Amount	Agency
Scarfe, C M								
The kinetics of calcite ar	The kinetics of calcite and dolomite dissolution in aqueous solutions at high temperatures Surface chemistry of clay mineral surfaces							AOSTR
Surface chemistry of clar Physics and chemistry o					OPR OPR	\$ \$	10,000 37,390	ARC NSERC
Co-investigator with Mus			-	An integrated	0111	Ψ	57,590	NOLITO
High-pressure laboratory	for research i	n ge	eochemistry and	geophysics	INF	\$	70,000	NSERC
Schwartz, F W Migration of nonaqueous	s phase petrole	eum	products in the s	aturated zone	OPR	\$	8,000	IOL
Exchange processes and	d mass transpo	ort ir	groundwater sy	stems	OPR	\$	38,400	NSERC
Smith, D G W Mineralogy petrology ge	nesis - Thor La	ıke			CTR	\$	5,000	DINA
Applications of the electrons	ron microprobe	in r	mineralogy, petro	logy and meteoritcis	OPR	\$	32,000	NSERC
Toth, J The use of hydrogeological mapping in hydrocarbon exploration study of the early cretaceous, deep basin region N.W. Alberta (graduate student Joanne Thompson)				OPR	\$	2,500	CHEL	
Development of hydroge	_				OPR	\$	10,000	NSERC
Development of a hydrog	geological app	roac	ch to petroleum e	xploration	OPR	\$	75,200	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts Infrastructure	13 1	\$ \$	269,465 70,000	NSERC Other Provincial	21 5	\$ \$	641,499 202,050	
Operating	33	\$	710,784	Other Federal	11	\$	105,318	
Total	47	\$	1,050,249	Other Agencies Total	10 47	\$ \$	101,381 1,050,249	
Department of Mathema	itics							
Investigator	Project	Title	•		Award		Amount	Agency
Abbott, H L				·····				
Extremal problems in nu Al-Salam, W	mber theory ar	nd c	ombinatorics		OPR	\$	11,185	NSERC
Sieved orthogonal polyn Allegretto, W	omials, basic s	erie	s, Geronimus ort	thogonal polynomials	OPR	\$	17,856	NSERC
Behaviour of the solution	ns and of the sp	oect	rum of differentia	al operators	OPR	\$	15,894	NSERC
Allison, B N Nonassociative algebras	and construct	ions	of lie algebras		OPR	\$	8,035	NSERC
Andersen, K F	Nonassociative algebras and constructions of lie algebras Andersen, K F				ODD	\$		NSERC
Weighted norm inequalit Antonelli, P L	ies ioi integrai	ope	raiors		OPR	Ф	5,960	
Mathematical models in Brungs , H H	chemical ecolo	gy			OPR	\$	11,921	NSERC
Valuations and chain rin	gs				OPR	\$	8,941	NSERC
Cliff, G Group rings and their re	oresentations				OPR	\$	8,035	NSERC
Ditzian, Z Moduli of smoothness, k	C-functional and	d rat	te of approximation	nn	OPR	\$	18,641	NSERC
Erbe, L H			• •	0 11		·		
Oscillation theory and be Freedman, H I	oundary value	prot	piems		OPR	\$	19,868	NSERC
Periodicity, stability and Hare, K E	population eco	logy	1		OPR	\$	15,894	NSERC
Thin sets and multipliers	;				OPR	\$	12,500	NSERC
Hoo, C S Implicative semilattices					OPR	\$	5,357	NSERC
Kharaghani, H	al ma a tod							
The excess of Hadamar Klamkin, M S	a matrices				OPR	\$	5,000	NSERC
Mathematical modelling, Kunzle, H P	geometric ine	qua	lities		OPR	\$	6,517	NSERC
Relativistic versus nonre	lativistic classi	cal _l	physical theories		OPR	\$	7,296	NSERC
Lau, A T M Subspace of the left reg	ular representa	ation	, crossed produc	ets and amenability	OPR	\$	19,868	NSERC
Problems in convexity a	nd combinatori	al g	eometry		OPR	\$	6,960	NSERC
Liu, C F A Extremal problems in hy	pergraphs and	ged	ometry		OPR	\$	5,960	NSERC
•	•							

Investigator		Project Ti	tle			Award		Amount	Agency
Ludwig, G									
Exact so	lutions in general rel	ativity				OPR	\$	5,960	NSERC
	ons of nonsmooth ar	alysis in co	ntro	I theory and gam	e theory: Asymptotic behaviour	OPR	\$	5,960	NSERC
Meir, A									
(1) Lacu Millar, R F	nary spline approxim	ation (2) Av	era	ge branch size of	rooted trees	OPR	\$	20,505	NSERC
The Ray Moodie, T B	leigh hypothesis and	inverse sca	atter	ing for the Helmh	oltz equation	OPR	\$	8,035	NSERC
Linear a	nd nonlinear waves in	n haemodyr	nam	ics, fracture, and	thermoelasticity	OPR	\$	18,749	NSERC
•	h in graph theory					OPR	\$	4,000	NSERC
Muldowney, J S			_			ODD	Φ	0 474	NCEDO
Qualitati Oguztoreli, M N	ve theory of differenti •	ai equation	S			OPR	\$	6,174	NSERC
•	g, analysis and simul	ation of cer	tain	scientific and ind	ustrial problems	OPR	\$	12,480	NSERC
Lie theor	γ					OPR	\$	11,000	NSERC
Pounder, J R			1 - 4' -			000	Φ	0.500	NOEDO
Stability Rhemtulla, A H	study of nonlinear re	currence re	iatio	ons		OPR	\$	2,500	NSERC
Topics in	n infinte solvable grou	ıps				OPR	\$	11,921	NSERC
Riemenschneid Approxim	າer, ຣັບ nation of functions of	one and se	ever	al variables		OPR	\$	18,641	NSERC
Rogers, T D		ono ana oc	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ai vaiiabioo		OPR			NSERC
Sabbarao, M V	dynamical systems					OPR	\$	7,142	NSERC
	n arithmetic functions	s and partiti	on t	heoretic problems	S	OPR	\$	14,285	NSERC
	in group rings					OPR	\$	23,842	NSERC
Sharma, A Cardinal	spline interpolation a	and interpol	ator	v function theory		OPR	\$	23,301	NSERC
Swaters, G E		•					-		
	pnic de-pnasing and and nonlinear wave a				nt Rossby wave triad packets	OPR OPR	\$ \$	7,000 15,000	EC NSERC
Tait, R J	and nonlinear wave a	ina eady m	oue	is in geophysical	nud dynamics	Orn	Ψ	13,000	NOLITO
Fluid flow Timourian, J G	w in linear and nonlin	ear elastic a	and	viscoelastic tubes	S	OPR	\$	14,285	NSERC
Singular		differential	equ	ations		OPR	\$	10,714	NSERC
Geometr	ry of finite-dimension	al Banach s	spac	es		OPR	\$	19,868	NSERC
A mixed		formulation	1 ар	plied to superson	ic aerodynamics	OPR	\$	7,379	NSERC
Weiss, A R Units of	integral group rings:	Centers of t	oloc	ks as orders		OPR	\$	11,921	NSERC
Wong, Y S	Fluid flow in linear and nonlinear elastic and viscoelastic tubes mourian, J G Singularity theory and partial differential equations mczak-Jaegermann, N Geometry of finite-dimensional Banach spaces an Roessel, H J A mixed Eulerian-Lagrangian formulation applied to supersonic aerodynamics veiss, A R Units of integral group rings: Centers of blocks as orders								DND
	•		rical	algorithms on su	percomputers	CTR OPR	\$ \$	60,000 15,500	NSERC
Zeidan, V	·			_					
Necessa Zizler, V	ary and sufficient con-	ditions for o	ptin	nization and gene	rai control problems	OPR	\$	5,010	NSERC
	ing theory of Banach	spaces and	d its	applications		OPR	\$	11,185	NSERC
Type of	Award	No.		Amount	Source of Funds	No.		Amount	
Contract		1 45	\$ \$	60,000 524,045	NSERC Other Federal	44 2	\$ \$	517,045 67,000	
Operatin Total	ig		Ф \$	584,045	Total	46	Ф \$	584,045	

Department of Microbiology

Investig	nator Project Title	Award		Amount	Agency
Fedora					
	To evaluate methods of reducing cyanide toxicity to methanogenic consortia so that cyanide-containing phenolic wastewaters are more amenable to anaerobic treatment	OPR	\$	8,000	IOL
	Co-investigator with Huck, P M (Engineering, Civil Engineering): Use of biological processes in				
	High performance liquid chromatograph	EQP	\$	20,300	NSERC
	Co-investigator with Hrudey, S E (Engineering, Civil Engineering): Role of support media in enhancing				
	Co-investigator with Huck, P M (Engineering, Civil Engineering): Bacterial growth rate measurement				
	Co-investigator with Westlake, D W: Gas chromatograph				
	Co-investigator with Huck, P M (Engineering, Civil Engineering): Process optimization for biological				
	Anaerobic microbial degradation of phenols applied to industrial wastewater treatment	OPR	\$	24,000	NSERC
	Co-investigator with Westlake, D W: The Response TM Gilford spectrophotometer		·	,	
	Co-investigator with Jordan, R B (Chemistry): Mass spectometry service laboratory				
	Co-investigator with Hrudey, S E (Engineering, Civil Engineering): Environmental process				
	biotechnology				
Jensen					
	Co-investigator with Roy, K L: Applied biosystems model 381A-01				
	Co-investigator with Westlake, D W: The Response TM Gilford spectrophotometer				
	Antibiotic production in streptomyces clavuligerus	OPR	\$	38,520	NSERC
	Co-investigator with Westlake, D W: Technical support for fermentation				
	Co-investigator with Westlake, D W: Collaborative Study with Dr. Wolfe,				
Page, \					
	Co-investigator with Westlake, D W: Technical support for fermentation				
	Co-investigator with Westlake, D W: The Response TM Gilford spectrophotometer				
	Iron and molybdenum accumulation in Azotobacter vinelandii	OPR	\$	35,438	NSERC
Pickard					
	Co-investigator with Westlake, D.W. Editorial support services - To				
	Co-investigator with Westlake, D.W. The Response TM Gilford spectrophotometer				
	Co-investigator with Westlake, D W: Technical support for fermentation	000	•	00 000	NOEDO
Roy, K	Continuous and batch production of fungal enzymes and metabolites	OPR	\$	23,000	NSERC
	Cloned human transfer RNA genes	OPR	\$	20,000	NSERC
	Applied biosystems model 381A-01 single column automated DNA synthesizer, with printer	EQP	\$	39,660	NSERC
Stemke		LG	Ψ	00,000	HOLHO
	Development of serodiagnosis for porcine mycoplasmal pneumonia	OPR	\$	45,650	ARCA
	Co-investigator with Roy, K L: Applied biosystems model 381A-01				
Taylor,					
	Cloning of Campylobacter species genes for use as diagnostic DNA probes	OPR	\$	45,470	NSERC
	Genetic studies of Campylobacters with special reference to mechanisms of tetracycline and erythromycin resistance	OPR	\$	33,438	NSERC
	son, B G Isolation and characterization of thermal and polymer mutants of symbiotic bacteria	ODD	Φ	10.000	BIOGI
	associated with entomogenous nematodes	OPR	\$	19,000	BIOSI
	gerstrom, R G				
	Co-investigator with Westlake, D W: The Response TM Gilford spectrophotometer				
	RNA-degrading enzymes in yeast. Extracellular products of lysobacter	OPR	\$	21,452	NSERC
	· · · · · · · · · · · · · · · · · · ·			, –	

Investigator	Project	Title			Award		Amount	Agency
expenses incurred by Dr				port services and incidental and as editors of the Canadian	CTR	\$	49,373	NRC
Journal of Microbiology Gas chromatograph	e c							NSERC
	• •			gical Research Station				
The Response TM Gilfor	d spectrophoto	omete	er	phosphorus, nitrogen	EQP	\$	22,720	NSERC
Technical support for fer	•			,	INF	\$	22,080	NSERC
Microbial metabolism of	•				OPR	\$	57,602	NSERC
Collaborative Study with beta-lactam compounds Yamamoto, T				robiological syntheses of novel \$43,000)	OPR			NSERC
	atopoietic necr	osis v	virus in reproduc	ctive products of spawning	OPR	\$	12,000	FOC
Analysis of infectious pa and to determine its path				vith lake trout in Cornwall Lake	OPR	\$	20,000	RPWF
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts Equipment	1 4	\$ \$	49,373 99,702	NSERC Other Provincial	14 2	\$ \$	420,702 65,650	
Infrastructure	1	\$	22,080	Other Federal	2	\$	61,373	
Operating Total	14 20	\$ \$	403,570 574,725	Other Agencies Total	2 20	\$ \$	27,000 574,725	
Department of Physics								
Investigator	Project	Title			Award		Amount	Agency
Co-investigator with Mille Co-investigator with Can Co-investigator with Mille Adler, J G Electron tunneling spect	neron, J M: Un er, C A: IEP-18	iversi	ty of Alberta - T	RIUMF	OPR	\$	45,408	NSERC
Cameron, J M Co-investigator with Roy Winter Institute on Quan 6-12, 1988				charge Experiment, Lake Louise, March	CFC	\$	10,000	NSERC
Co-investigator with Mille	er, C A: IEP-18	8, Ne	eutron-proton ch	narge				
	-		_	euteron tensor polarimeter	OPR	\$	95,000	NSERC
University of Alberta - Tr					OPR	\$	369,000	NSERC
Campbell, B A Superunification and sup Capri, A Z	perstrings				OPR	\$	17,000	NSERC
Solutions in quantum fie Cumming, G L	-				OPR	\$	19,100	NSERC
To cover operating costs National Network for End	ergy, <mark>M</mark> ines an	d Res	sources-Departi		OPR	\$	17,000	EMRC
Systematics of Pb isotop Egerton, R F					OPR	\$	28,000	NSERC
Electron energy-loss spe Evans, M E Co-investigator with Lerl magnetostratigraphic	bekmo, J F (Ge			•	OPR	\$	31,680	NSERC
	Quaternary paleomagnetic and archeomagnetic investigations						33,000	NSERC
Properties of quantum s Gortel , Z	olids				OPR	\$	33,600	NSERC
Dunamical processes at Gough, D I	solid surfaces				OPR	\$	15,840	NSERC
	Magnetovariation, magnetotelluric and paleomagnetic studies							

Investigator	Project Title	Award		Amount	Agency
Gray, J					
Stable isotope studies of tree	e rings, peat and cave deposits to determine past climate in	OPR	\$	9,600	NSERC
Canada Green, C A					
Co-investigator with Camero	n, J M: University of Alberta - TRIUMF				
Green, P W University of Alberta VAX cor	mouter facility	INF	\$	28,000	NSERC
•	A: IEP-188, Neutron-proton charge		*	20,000	1102110
Co-investigator with Greenia	us, L G: Charge symmetry breaking in np				
	A: IEP-189, Knockout of deeply bound				
Greeniaus, L G Charge symmetry breaking in	n np elastic scattering at 350 MeV	OPR	\$	14,000	NSERC
	A: IEP-189, Knockout of deeply bound			,	
-	A: IEP-188, Neutron-proton charge				
	us, L G: Charge symmetry breaking in np				
Co-investigator with Cameron Hron , F	n, J M: University of Alberta - TRIUMF				
	computer simulation of seismic waves in real media	OPR	\$	32,000	NSERC
Hube, D P Photometric and spectroscop	sia atudiae of early type stare	OPR	\$	10,176	NSERC
Hughes, D G	or studies of early type stars	OFT	Ψ	10,170	NOLITO
	in solids and biological materials	OPR	\$	18,048	NSERC
Hutcheon, D A Co-investigator with Miller C	A: IEP-189, Knockout of deeply bound				
<u> </u>	ld, W J: Tagged photon induced reaction				
	n, J M: University of Alberta - TRIUMF				
Israel, W Strong gravitational fields		OPR	\$	42,912	NSERC
Jones, F W		Orit	Ψ	72,312	NOLITO
•	J S: Measurement and analysis of long-term		_		
its relation to hydrocarbon ma		CTR	\$	29,696	EMRC
hydrates in the Canadian nor		CTR OPR	\$ \$	30,000 8,000	EMRC IOL
•	carbon occurences in the western Canadian sedimentary basine eat flow, and earth tides and tilts	OPR	Ψ \$	26,880	NSERC
Jung, J A					
Low temperature and high temperature programmable f	temperature attachment for X-ray diffractometer 2) High	EQP	\$	44,000	NSERC
Kamal, A N	umuss				
Theoretical particle analysis Kanasewich, E R		OPR	\$	29,400	NSERC
Seismic tomography in steam	n injection projects	CTR	\$	160,000	AOSTR
Reprocessing and interpretat	tion of selected industry acquired regional seismic reflection	CTR	\$	196,000	EMRC
data from Melville Island	Olo Tarana and an analysis and a false				
	g, G L: To cover operating costs of the c tomographic studies in steam injection projects and analysis	OPR	\$	8,000	IOL
of Cold Lake seismicity	c tomographic studies in steam injection projects and analysis	0111	Ψ	0,000	102
Geophysical investigation of	the crust and mantle	OPR	\$	66,133	NSERC
Kernahan, J A	on, E H: Spectroscopic studies of atomic				
Khanna, F C			_		
Role of non-nucleon degrees		OPR CFC	\$	30,720	NSERC
Kitching, P	cal Physics, University of Alberta	CFC	\$	25,000	NSERC
	n, J M: University of Alberta - TRIUMF				
Pacman spectrometer		EQP	\$	63,320	NSERC
Co-investigator with Miller, C Lapointe, C	A: IEP-189, Knockout of deeply bound				
Co-investigator with Greenia	us, L G: Charge symmetry breaking in np				
McDonald, W J					
Tagged photon induced reac	A: IEP-189, Knockout of deeply bound	OPR	\$	95,000	NSERC
	us, L G: Charge symmetry breaking in np	J. 11	Ψ	50,000	
	n, J M: Determination of the deuteron charge				
	n, J M: University of Alberta - TRIUMF				

Investigator	Project Title	Award		Amount	Agency
Miller, C A					
	tor with Cameron, J M: University of Alberta - TRIUMF				
	ockout of deeply bound nucleons	OPR	\$	7,000	NSERC
	tor with Greeniaus, L G: Charge symmetry breaking in np				
	utron-proton charge exchange amplitudes	OPR	\$	12,000	NSERC
Moss, G A Co-investigat	tor with Cameron, J M: University of Alberta - TRIUMF				
	tor with Kitching, P: Pacman spectrometer				
Co-investigat	tor with Miller, C A: IEP-188, Neutron-proton charge				
Neilson, G C	Accordish Miller O A IED 400 March				
_	tor with Miller, C A: IEP-188, Neutron-proton charge tor with McDonald, W J: Tagged photon induced reaction				
_	tor with Cameron, J M: Determination of the deuteron charge				
_	tor with Cameron, J M: Determination of the dedictor charge				
Nyland, E	or with Cameron, 5 Mr. Onliversity of Alberta - Thiolin				
	or with Kanasewich, E R: Seismic tomography in steam injection				
	of seismicity and geology constraints for small scale geodynamics	OPR	\$	14,600	NSERC
Olsen, W C	tor with Comoron I M. University of Alberta TDII IME				
	tor with Cameron, J M: University of Alberta - TRIUMF tor with Miller, C A: IEP-189, Knockout of deeply bound				
	tor with McDonald, W J: Tagged photon induced reaction				
Paranjape, B V	or with McDonaid, W 5. Tagged photon induced reaction				
Interface prop	perties of two crystals and surface plasma excitation	OPR	\$	9,792	NSERC
Pinnington, E H	la akudina af akamin amanan launta	000	•	10.005	
Razavy, M	ic studies of atomic energy levels	OPR	\$	48,685	NSERC
	eory & Many-body problem	OPR	\$	22,800	NSERC
Rogers, J S					
	nt and analysis of long-term tilt from the tiltmeter boreholes at the IOCO GLISP pilot project	CTR	\$	36,080	AOSTR
Rostoker, G	IOCO GLISP pilot project				
	c activity in the auroral zone	OPR	\$	60,000	NSERC
	tor with Scarfe, C M (Geology): High-pressure laboratory for research				
Roy, G	n of the deuteren charge form feater at large a (agreed)	ODD	•	45.705	NATO
	n of the deuteron charge form factor at large q (squared) tor with Cameron, J M: Determination of the deuteron charge	OPR	\$	15,795	NATO
_	tor with Cameron, J M: Determination of the dediction charge tor with Cameron, J M: University of Alberta - TRIUMF				
Rozmus, W	or with Gameron, o wit onliversity of Alberta - Trifowi				
Co-investigat	tor with Offenberger, A A (Engineering, Electrical Engineering): KrF laser				
facility					
	tor with Offenberger, A A (Engineering, Electrical Engineering): KrF laser				
technology a		ODD	Φ.	10.000	NOEDO
Samson, J C	ry: laser-plasma interactions	OPR	\$	16,000	NSERC
	s and maintenance support for CANOPUS Tellurics	CTR	\$	57,737	NRC
	F magnetic fields, and plasma waves in the Earth's magnetosphere	OPR	\$	34,560	NSERC
Sheinin, S S	a cleature misusana.	000	•	00.000	NOEDO
Sherif, H S	n electron microscopy	OPR	\$	28,800	NSERC
	tudies in intermediate energy nuclear reactions	OPR	\$	16,784	NSERC
Spanos, T J T					
	hanics of heavy oil reservoirs	CTR	\$	95,304	AOSTR
Dynamics of Stephenson, J	permeable media	OPR	\$	10,000	NSERC
	ase transitions, statistical mechanics and thermodynamics	OPR	\$	9,830	NSERC
Stinson, G M	·	• • • • • • • • • • • • • • • • • • • •	*	0,000	
	tor with Greeniaus, L G: Charge symmetry breaking in np				
_	tor with Cameron, J M: University of Alberta - TRIUMF				
Co-investigat Takahashi, Y	tor with Cameron, J M: Determination of the deuteron charge				
	d theory method in particle and Many-body physics	OPR	\$	32,352	NSERC
Tkachuk, R		5, 11	Ψ	32,332	1102110
	tor with Greeniaus, L G: Charge symmetry breaking in np				
Umezawa, H	ered states in particle physics and Many-body problems	OPR	ď	40.000	NOEDO
Weichman, F L	area states in particle physics and many-body problems	OPH	\$	49,920	NSERC
	fication in GaAs	OPR	\$	18,600	NSERC
				-	

Investigator	Project 1	ïtle			Award		Amount	Agency
Woods, S B								
Metals at low temperature	•				OPR	\$	43,200	NSERC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Conferences	2	\$	35,000	NSERC	44	\$	1,732,060	
Contracts	7	\$	604,817	Other Provincial	3	\$	291,384	
Equipment Infrastructure	2 1	\$ \$	107,320 28,000	Other Federal Other Agencies	5 3	\$ \$	330,433 31,795	
Operating	43	\$	1,610,535	Total	55	\$	2,385,672	
Total	55	\$	2,385,672					
Department of Psycholog	IV see also f	acu	ilty of Arts					
Investigator	Project 1		,		Award		Amount	Agency
Beck, C H M	-							
Chronic benzodiazepine e Bourassa, C M	effects on rat s	ocia	ıl behavior		OPR	\$	16,307	AMHAC
Factors influencing visible	persistence a	ınd į	perceptual scher	nata	OPR	\$	10,000	NSERC
Caelli, T M Computer assisted mamn	nography				EQP	\$	16,247	AHFMR
Cross-correlation technique		and	d computer patte	rn recognition	OPR	Ф \$	9,203	NSERC
Di Lollo, V				_				
To cover expenses conne Initial stages of visual info				nadian Journal of Psychology	OPR OPR	\$ \$	14,600 36,863	CPSYA NSERC
Dobbs, A R			ig			Ψ	30,003	
Minor head injury and acc	•				OPR	\$	46,750	ACOH
A longitudinal study of me					OPR	\$	40,000	AMHAC
Co-investigator with Rule, Grant, D S	D G (ARS). E	IVIIC	ommentar inniuent	ces on the				
Short-term retention in pig	jeons				OPR	\$	20,301	NSERC
Heth, C D Processes of spatial search	ch				OPR	\$	10,254	NSERC
Kingma, J				4		•		NOEDO
Memory development in c Robertson, A M	lisabled and m	ent	ally retarded chil	aren	OPR	\$	12,000	NSERC
Neural substrates of prefr	ontal cortex se	elf-s	timulation and of	neuroleptic drugs	OPR	\$	14,880	NSERC
Rozeboom, W W Quadratic factor analysis					OPR	\$	3,840	NSERC
Rule, S J					0.00	·	,	
Judgements of perceptua Spetch, M L	I magnitudes				OPR	\$	23,937	NSERC
Memory for time and space	ce				OPR	\$	11,417	NSERC
Treit, D R Models and mechanisms	of anxiolytic d	rua	action		OPR	\$	13,584	NSERC
	or anxiotytic a	ug	4011011		0111	Ψ	10,004	NOLITO
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Equipment Operating	1 15	\$ \$	16,247 283.936	AHFMR NSERC	1 11	\$ \$	16,247 166,279	
Total	16	\$	300,183	Other Provincial	3	\$	100,279	
	_	•	,	Other Agencies	1	\$	14,600	
				Total	16	\$	300,183	
Department of Ctatistics	and Ammili	الم	Drobobilis					
Department of Statistics Investigator	Project		riobability		Award		Amount	Δαορου
Al-Hussaini, A	riojecti	we			AWaiu		Amount	Agency
Stochastic processes					OPR	\$	8,388	NSERC
Aly, E E A On some strong and weal	k approximatio	ากร	and their applica	tions in nonparametric statistics	OPR	\$	7,200	NSERC
Elliott, R J				a.ss in nonparamothe statistics		·		
Filtering and smoothing o	•	oce:	sses.		OPR	\$	15,000	NSERC
Filtering of jump processe					CTR	\$	28,003	USAF
Point processes and appr Hooper, P M	oximation				CTR	\$	39,936	USDA
Experimental randomizati	on and statisti	cal	models		OPR	\$	11,146	NSERC

Autocorrelation in the paired comparison of time series Statistical service centre Statistical service centre Small area estimation. Jackkinfle procedure for variance component models N= Mall area estimation. Jackkinfle procedure for variance component models N= Mall area estimation. Jackkinfle procedure for variance component models N= Mall area estimation. Jackkinfle procedure for variance component models N= N	Investigator	Project	Title			Award	-	Amount	Agency
On the empirical Bayes procedure OPR \$ 6,000 NSERC MoGregor, JR Autocorrelation in the paired comparison of time series Statistical service centre Statistical service centre Statistical service centre Sheehand N G N Small area estimation-Jackknife procedure for variance component models OPR \$ 6,000 NSERC Sheehand N Small area estimation-Jackknife procedure for variance component models OPR \$ 6,000 NSERC Sheehand N Small area estimation-Jackknife procedure for variance component models OPR \$ 5,007 NSERC OPR \$ 5,007 NSERC Type of Award No. Amount Source of Funds No. Amount Source of Funds OPR \$ 5,007 NSERC Type of Award No. Amount Source of Funds No. Amount No. Amount No. Amount Source of Funds No. Amount N	Korunomuni B I								
Autocorrelation in the paired comparison of time series Statistical service centre Statistical service centre Small area estimation. Jackknife procedure for variance component models OPR \$ 1,4000 NSERC Sheelan J, N Robust statistical inference Robust Robust statistical inference Robust Robus		s procedure				OPR	\$	6,000	NSERC
Statistical service centre Presad, N. G. M. SERC Presad, N. G. M. SERC Sheahan, J. M. Service of Funds Sheahanan, J. M. Service of Sheahanan,	McGregor, J R			·		OPP	Φ	0.070	NCEDO
Prasad, N G N Small area estimation.Jackknife procedure for variance component models Smellan, J N Robust statistical inference Robust statistical inference Robust statistical inference Robust statistical inference Robust statistical methods Robust statistical met	·		on or i	lime series					
Sheahan, J.N Robust statistical inference Wiens, D.P Robust statistical methods Type of Award No. Amount Source of Funds No. Amount Contracts 2 \$ 67,939 NSERC 10 \$ 80,799 Infrastructure 1 \$ 14,000 Other Agencies 2 \$ 67,939 Operating 9 \$ 66,789 Total 12 \$ 148,728 Department of Zoology Investigator Inve	Prasad, N G N	ie				IIVI	Ψ	14,000	NOLITO
Robust statistical inference Wiens, D.P Robust statistical methods Type of Award No. Amount Source of Funds No. Amount Source of Funds No. Amount Contracts 2 \$ 67,939 NSERC 10 \$ 80,789 Infrastructure 1 \$ 14,000 Other Agencies 2 \$ 67,939 Total 12 \$ 148,728 Department of Zoology Investigator Project Title No. Amount Amount Amount Amount Agency Amount Amount Amount Agency Amount Agency Amount Agency Total Department of Zoology Investigator Project Title Award Amount Agency Amount Agency Addicort, J.F Regulation of costs and benefits in mutualistic systems Regulation of costs and benefits in mutualistic systems Regulation of costs and benefits in survival and recruitment in the lesser snow goose CTR \$ 1,750 EC Co-investigator with Preps., E E: Meancok Biological Research Station Problems in animal dispersal Toxicology of peregrine falcons in the Keewatin district of the N.W.T OPR \$ 39,500 NSERC Boutin, Su Ocy of peregrine falcons in the Keewatin district of the N.W.T OPR \$ 30,400 NSERC Chambers, P Co-investigator with Preps., E E: Water quality studies of Alberta Chang, J.P Automated radioactive flow detection system for Gilson HPLC High performance liquid chromatography (HPLC) system Automated radioactive flow detection system for Gilson HPLC High performance liquid chromatography (HPLC) system Co-investigator with Boag, D.A: Toxicology of peregrine falcons Co-investigator with Boag, D.A: Toxicology of peregrine falcons Co-investigator with Boag, D.A: Toxicology of peregrine falcons Goldberg, J.I Embryonic and postembryonic development of the serotonin phenotype in Helisoma Co-investigator with Boag, D.A: Toxicology of peregrine falcons Goldberg, J.I Embryonic and postembryonic development of the serotonin phenotype in Helisoma Co-investigator with Preps. E: Preparation of an atlas of Alberta Co-investigator with Preps. E: Preparation of an atlas of Alberta Co-investigator with Preps. E: Preparation of an atlas of A	Small area estimation:	Jackknife proced	lure f	or variance con	nponent models	OPR	\$	6,000	NSERC
Nemark P Robust statistical methods No. Amount Source of Funds No. Amount Contracts 2		ence				OPB	\$	3 979	NSERC
Type of Award No. Amount Source of Funds No. Amount Contracts 1 \$ \$ 7,339	Wiens, D P	51100					Ψ	0,070	
Contracts 2 \$ 67,939 NSERC 10 \$ 80,789 Infrastructure 1 \$ 1 \$ 14,000 Other Agencies 2 \$ 67,393 Other Agencies 2 \$ 67,393 Other Agencies 2 \$ 67,393 Other Agencies 12 \$ 148,728 Total 12	Robust statistical meth	ods				OPR	\$	5,097	NSERC
Infrastructure 1 \$ 14.000 Other Agencies 2 \$ 67,939 Total 10 \$ 148,728	Type of Award	No.		Amount	Source of Funds	No.		Amount	
Department of Zoology Investigator Project Title Award Amount Agency Addiciont, J F Regulation of costs and benefits in mutualistic systems Boag, D P Feed costs associated with overwintering birds Feed costs associated with evenual birds F	Contracts								
Department of Zoology Investigator Project Title Award Amount Agency Addicott, J F Regulation of costs and benefits in mutualistic systems OPR \$ 27,500 NSERC Boag, D A Feed costs associated with overwintering birds The role of familial relationships in survival and recruitment in the lesser snow goose CFR \$ 1,750 EC Co-investigator with Prepas, E E: Meanook Biological Research Station Problems in animal dispersal Toxicology of peregrine falcons in the Keewatin district of the N.W.T OPR \$ 20,150 WWFC Boutin, S A Experimental tests of mammalian population regulation OPR \$ 39,500 NSERC Chambers, P Co-investigator with Prepas, E E: Water quality studies of Alberta Chang, J P Automated radioactive flow detection system for Gilson HPLC High performance liquid chromatography (HPLC) system Intracellular mechanisms meditating the actions of gonadotropin-releasing hormone and dopamine on gonadotropin secretion in goldfish Clifford, H F Ecology of aquatic invertebrates OPR \$ 24,960 NSERC Court, G S Cournvestigator with Boag, D A: Toxicology of peregrine falcons Gallin, W J Cellular mechanisms of development Oc-investigator with Boag, D A: Toxicology of peregrine falcons Gallin, W J Cellular mechanisms of development of the serotonin phenotype in Helisoma DPR \$ 20,0087 AHFMR Embryonic and postembryonic development of the serotonin phenotype in Helisoma DPR \$ 24,000 NSERC Gorbman, A Sexual development of the serotonin phenotype in Helisoma DPR \$ 24,000 NSERC Gorbman, A Sexual development of hagfish Hannon, S J Behavioral and population ecology of northern birds Co-investigator with Prepas, E E: Preparation of an atlas of Alberta Holmes, J C Investigations on communities of parasitic Helminths OPR \$ 29,500 NSERC Kaufman, W R Physiological and developmental studies on the salivary glands and on reproduction of ixodi ticks (Acart: ixodidae) Lauber, J K			\$				•		
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	Lauber, J K Photobiological effects	s on endocrine a	nd an	owth parameter	rs	OPR	\$	25.000	NSERC

Investigator	Project Title	Award		Amount	Agency
MacKay, W C					
	h Prepas, E E: An atlas of Alberta lakes				
Environmental phy	siology of fish	OPR	\$	19,000	NSERC
Co-investigator wit	h Prepas, E E: Meanook Biological Research Station				
	h Prepas, E E: Preparation of an atlas of Alberta				
Mahrt, J L	1.7 1.1 50 B 1.6 1. C . D. D. C . D.				
Malhotra, S K	h Zwickel, F C: Population ecology of vertebrates				
	cal and structural characterization of new cell marker antigens in nervous	OPR	\$	30,000	NSERC
tissue	•				
Donations/gifts tov	vards multiple sclerosis research	OPR	\$	5,000	TN
Publication of fluor	escence chart	OPR	\$	500	ZEISS
Murie, J O	. It's history and assist habanian of Cairrid valents	ODD	φ	20 500	NCEDO
Nelson, J S	y, life history, and social behavior of Sciurid rodents	OPR	\$	29,500	NSERC
	ogeographic studies of Trachinoid and Cottoid fishes, classification of	OPR	\$	24,000	NSERC
	onary studies of, primarily, Stickleback fishes		·	·	
Nursall, J R		000	•	45.000	NOTES
	l behavior in Ophioblennius atlanticus	OPR	\$	15,000	NSERC
Palmer, A R Shell form and evo	plution in Prosobranch gastropods: Genetic basis and adaptive value of	OPR	\$	46,500	NSERC
entraspecific shell		• • • • • • • • • • • • • • • • • • • •	•	.0,000	
Peter, R E					
	(Alberta/China/Guelph)	CTR	\$	58,100	IDRC
	nd endocrine control mechanisms in Teleost fishes	OPR	\$	72,732	NSERC
Prepas, E E Control of algae in	farm duqquts	OPR	\$	16,500	ADA
-	blied Aquatic Studies Workshop, Edmonton, Alberta, 23-24 February 1988	CFC	\$	1,000	AE
	les of Alberta lakes & rivers, Part I and II	OPR	\$	20,000	AE
An atlas of Alberta		CTR	\$	59,000	AE
	plaining the chemical mechanism, ecological implications and long-term	CTR	\$	3,000	AE
potential of lime tre		•	*	0,000	
·	rm dugouts as water supplies: Use of lime for algae control	OPR	\$	16,500	ARCA
Lime and aluminu	m treatment of Alberta dugouts	CTR	\$	4,000	EC
Autoanalyer for ph	osphorus, nitrogen and sulfate analysis	EQP	\$	15,726	NSERC
Prediction and ma	nipulation of productivity in eutrophic lakes	OPR	\$	27,500	NSERC
Meanook Biologica	al Research Station	INF	\$	14,788	NSERC
	atlas of Alberta lakes	OPR	\$	35,000	RPWF
Reimchen, T E	Control of the Original Control	000	Φ.	40.000	NOEDO
Niche segregation Ruth, R F	, sources of mortality and adaptation in Stickleback	OPR	\$	19,200	NSERC
Radiation induced	hypotension	CTR	\$	110,000	DND
Samuel, W M	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		•	,	
	s on host populations with emphasis on moose/winter tick interactions	OPR	\$	30,000	NSERC
Spencer, A N	male hehavioure in invertahrates	OPR	\$	37,964	NSERC
	mple behaviours in invertebrates th Goldberg, J I: Inverted photomicroscope with phase-contrast,	OFN	Ψ	37,304	NOLINO
Stacey, N E	in Goldberg, 5 I. Inverted photomicroscope with phase-contrast,				
	nonal, and central neurochemical aspects of sexual behavior in fish	OPR	\$	36,352	NSERC
Steiner, A L			_		
	olutionary biology of wasps, their insect prey and parasites	OPR	\$	9,000	NSERC
Stirling, I G Mortality natterns	of subadult polar bears	OPR	\$	27,400	NSERC
= :	ogy of Atlantic walruses, Odobenus rosmarus rosmarus, in the central	OPR	\$	12,000	WWFC
Canadian high Ard		0	*	, =,000	
Strobeck, C					
	th Roy, K L (Microbiology): Applied biosystems model 381A-01				
-	th Dean (Agriculture and Forestry): Genetic variation and adaptation				
	th Prepas, E E: Meanook Biological Research Station		_	د سم	
	ches to the study of evolutionary processes in natural populations	OPR	\$	33,438	NSERC
Tonn, W M	th Prepas, E E: Meanook Biological Research Station				
-	gy and population regulation of fishes in small boreal lakes	OPR	\$	22,500	NSERC
Community 60010(gy and population regulation of horizon in sinali boreal lance	J. 11	Ψ	,500	

nvestigator	Projec	Title			Award		Amount	Agency
Vang, L C H								
	ardiac function at low b	ody t	emperature		OPR	\$	37,000	CHF
Investigate mod	de and mechanism of	heop	hylline - stimulate	ed thermogenesis	CTR	\$	68,116	DND
Improving cold	tolerance by theophyll	ine: N	Mode and cellular	mechanisms of action	OPR	\$	44,574	MRC
	nce liquid chromatogra				EQP	\$	21,500	NSERC
.		-		earch and development of				
Co-investigator of the in vivo si		łome	Economics, Foo	ds and Nutrition): Demonstration				
Homeotherms	in cold: Strategies and	adap	tations		OPR	\$	47,316	NSERC
Co-investigator	with Prepas, E E: Aut	oanal	yer for phosphori	us, nitrogen				
Co-investigator	with Pang, P K (Medi	cine,	Physiology): Herb	oal medicine program				
Wilson, M V					000	•		444104
•	n of the vertebrate pal		••		OPR	\$	3,000	AMUSA
	is and early Tertiary fis	hes o	of North America		OPR	\$	22,080	NSERC
Zalik, S E	biology of cellular adh	ocion	o during ombrugg	onosis	OPR	\$	42.980	MRC
	· ·				OPR	\$	40,000	NSERC
Studies on the Zwickel, F C	cell surface during reg	enera	ation and develop	omeni	OFN	Φ	40,000	NOENU
•	logy of vertebrates				OPR	\$	20,000	NSERC
Type of Awar	d No		Amount	Source of Funds	No.		Amount	
Conferences	1	\$	1,000	AHFMR	2	\$	281,582	
Contracts	7	\$	303,966	MRC	2	\$	87,554	
Equipment	5	\$	153,525	NSERC	37	\$	1,067,555	
Infrastructure		\$	14,788	Other Provincial	7	\$	151,000	
Operating	46	\$	1,435,428	Other Federal	5	\$	241,966	
Total	60	\$	1,908,707	Other Agencies Total	7 60	ф ф	79,050 1,908,707	
				rotai	00	Þ	1,900,707	

Office of the President

Type of Award	No.		Amount	Source of Funds	No.	Amount
Conferences	4	\$	40,389	AHFMR	1	\$ 10,389
Total	4	\$	40,389	MRC	1	\$ 10,000
		•	•	NSERC	1	\$ 10,000
				SSHRC	1	\$ 10,000
				Total	4	\$ 40,389

Office of the President

estigator	Project 1	Title -			Award		Amount	Agency
I-Laban, B National Conference on April 26 to April 29, 1988		earch	and the Future	of Canada, Edmonton, Alberta,	CFC	\$	10,389	AHFMF
	University Rese	earch	and the Future	of Canada, Edmonton, Alberta,	CFC	\$	10,000	MRC
National Conference on April 26 to April 29, 1988	•	earch	and the Future	of Canada, Edmonton, Alberta,	CFC	\$	10,000	NSER
•	University Rese	earch	and the Future	of Canada, Edmonton, Alberta,	CFC	\$	10,000	SSHRO
National Conference on	University Rese	earch	and the Future	of Canada, Edmonton, Alberta, Source of Funds	CFC No.	\$	10,000 Amount	SSHRO
National Conference on April 26 to April 29, 1988 Type of Award	University Rese	earch \$	Amount			\$.,	SSHRO
National Conference on April 26 to April 29, 1988	University Reso			Source of Funds		· ·	Amount	SSHRO
National Conference on April 26 to April 29, 1988 Type of Award	University Reso		Amount	Source of Funds AHFMR		\$	Amount 10,389	SSHRO
National Conference on April 26 to April 29, 1988 Type of Award	University Reso		Amount	Source of Funds AHFMR MRC		\$	Amount 10,389 10,000	SSHRO

VP Academic

Type of Award

No.

Amount

Contracts Infrastructure	1 4	\$ \$	4,020 96,700	AHFMR SSHRC	1 4	\$ \$	54,200 48,440	
Operating	2	\$	13,940	Other Provincial	1	\$	4,020	
Total	7	\$	114,660	Other Federal Total	1 7	\$ \$	8,000 114,660	
epartment of Computin	g Service	s						
nvestigator	Project	Title			Award	·-	Amount	Agency
crawford, G Computer networking stud wasechko, H	dy				CTR	\$	4,020	AAEM
Co-investigator with Craw edorick, D Co-investigator with Craw		•	_					
lumphrey, C K An index to the Canadian		•	_	·y · · ·	OPR	\$	5,940	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	1	\$	4,020	SSHRC	1	\$	5,940	
Operating Total	1 2	\$ \$	5,940 9,960	Other Provincial Total	1 2	\$ \$	4,020 9,960	
.ibrary System	Project	Title			Award		Amount	Agency
charles, J								
British popular fiction, 177					INF	\$	20,000	SSHRC
Hogarth Press Collection Freeman, P	- for the Brud	e Pe	el Special Collec	ctions Library	INF	\$	10,000	SSHRC
Award to University of Alk	erta Medical	Libra	ry - Library Sup	port	INF	\$	54,200	AHFMR
Vikeley, J K Romanticism collection					INF	\$	12,500	SSHRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Infrastructure	4	\$	96,700	AHFMR	1	\$	54,200	
				SSHRC	3	\$	42,500	
				Total	4	\$	96,700	
University of Alberta Arc	hives							
nvestigator	Project	Title			Award		Amount	Agency
Parker, J M William Rowan Papers					OPR	\$	8,000	CCA
Operating				Other Federal	1	\$	8,000	

Source of Funds

No.

Amount

VP Research

Type of Award	No.	Amount	Source of Funds	No.	Amount
Contracts	1	\$ 136,625	Other Provincial	1	\$ 150,000
Operating	1	\$ 150,000	Other Federal	1	\$ 136,625
Total	2	\$ 286,625	Total	2	\$ 286,625

VP Research

nvestigator	Project	Title			Award		Amount	Agency
(aplan, J G		_4			ODD.	Ф.	150,000	ATDT
Strengthening office of	r technology tran	sier			OPR	\$	150,000	ATRT
Technology transfer					CTR	\$	136,625	NRC
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Contracts	1	\$	136,625	Other Provincial	1	\$	150,000	
Operating	1	\$	150,000	Other Federal	1	\$	136,625	
Total	2	\$	286,625	Total	2	\$	286,625	

Interdisciplinary Research Units

Type of Award	No.	Amount	Source of Funds	No.	Amount
Contracts	1	\$ 7,100	NSERC	3	\$ 44,700
Operating	8	\$ 96,712	SSHRC	2	\$ 8,637
Total	9	\$ 103,812	Other Provincial	1	\$ 25,000
			Other Federal	2	\$ 19,523
			Other Agencies	1	\$ 5,952
			Total	9	\$ 103,812

Boreal Institute for Northern Studies

Investigator	Project	Title			Award	Amount	Agency
Schweger, B F A comparative stud	dy of historic arctic c	lothin	g in Scandinavi	a and Canada and the	OPR	\$ 4,637	SSHRC
theoretical basis fo	r analysis						
Wein, R W Vegetation manage	ement workshop				CTR	\$ 7,100	EC
	of severe (deep-burn	ning)fi	res on forest so	ils	OPR	\$ 5,952	NATO
Type of Award	No.		Amount	Source of Funds	No.	Amount	
Contracts	1	\$	7,100	SSHRC	1	\$ 4,637	
Operating	2	\$	10,589	Other Federal	1	\$ 7,100	
Total	3	\$	17,689	Other Agencies	1	\$ 5,952	
		•	•	Total	3	\$ 17,689	

Canadian Institute of Ukrainian Studies

Investigator	Project Title	Award	Amount	Agency
	d writing of Encyclopedia of Ukraine. Funding (\$85,067.96) incyclopedia Office at the University of Toronto	is administered OPR		CFUS

nvestigator	Project	Title			Award	_	Amount	Agency
Sobsey, R J								
A literature review: Sex	kual abuse of ind	lividua	als with mental	handicaps	OPR	\$	12,423	HWC
/arnhagen, C K Logical relations & com	anrohonsion of o	vnoci	fory proce		OPR	\$	10.000	NSERC
•	•	•	• •	reading comprehension and	OPR	\$	4.000	SSHRC
instruction	owship - Develop	Jilleili	or a moder or	eading complehension and	OFN	Ψ	4,000	SSTING
Type of Award	No.		Amount	Source of Funds	No.		Amount	
Operating	3	\$	26,423	NSERC	1	\$	10,000	
				SSHRC	1 1 3	\$ \$ \$	4,000 12,423	
				Other Federal				
				Total				
Devonian Botanic Gard	den			Total	3	\$	26,423	
Devonian Botanic Gard	den Project	Title		Total	3 Award	\$ 	26,423 Amount	Agency
nvestigator Currah, R Cultural and taxonomic	Project c studies of ector		rhizal fungi ass	Total ociated with lodgepole pine and	·	\$,	
nvestigator Currah, R Cultural and taxonomic white spruce in Alberta	Project studies of ector	nycor	_	ociated with lodgepole pine and	Award		Amount	<i>Agency</i> AFDRT NSERC
currah, R Cultural and taxonomic white spruce in Alberta Taxonomy and ecology	Project studies of ector	nycor	_	ociated with lodgepole pine and	Award OPR	\$	Amount 25,000	AFDRT
nvestigator Currah, R Cultural and taxonomic white spruce in Alberta	Project c studies of ector y of fungi associa	mycor ated v	vith 1) orchids,	ociated with lodgepole pine and and 2) keratin	Award OPR	\$	Amount 25,000	AFDRT
nvestigator Currah, R Cultural and taxonomic white spruce in Alberta Taxonomy and ecology	Project c studies of ector y of fungi association	mycor ated v	vith 1) orchids,	ociated with lodgepole pine and and 2) keratin	Award OPR	\$	Amount 25,000	AFDRT
Currah, R Cultural and taxonomic white spruce in Alberta Taxonomy and ecology Sigler, L Co-investigator with Cu	Project c studies of ector y of fungi association	mycor ated v	vith 1) orchids,	ociated with lodgepole pine and and 2) keratin	Award OPR OPR	\$	Amount 25,000 19,700	AFDRT NSERC
Currah, R Cultural and taxonomic white spruce in Alberta Taxonomy and ecology Sigler, L Co-investigator with Cu	Project c studies of ector y of fungi associa urrah, R: Cultura y of microfungi	mycor ated v	vith 1) orchids, taxonomic stud	ociated with lodgepole pine and and 2) keratin lies Source of Funds NSERC	Award OPR OPR	\$ \$	Amount 25,000 19,700 15,000 Amount 34,700	AFDRT NSERC
Currah, R Cultural and taxonomic white spruce in Alberta Taxonomy and ecology Gigler, L Co-investigator with Cu Taxonomy and ecology Type of Award	Project c studies of ector y of fungi associa urrah, R: Cultura y of microfungi No.	mycor ated v	vith 1) orchids, taxonomic stud	ociated with lodgepole pine and and 2) keratin lies Source of Funds	Award OPR OPR OPR No.	\$ \$	Amount 25,000 19,700 15,000 Amount	AFDRT NSERC

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